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8.5 EDITION LONDON MARKETPLACE APRIL 2001 VOLUME 14 NO. 4

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Report : Mid range Inkjets

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APRIL 2001

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Lab Test: Network approaches
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BROADBAND 14 May, Apr. 13

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LETTERS >

Wireless Internet: and an easier way

I wish you'd give more information on the wireless setup referred to in the March "Letters from the editor." Placing my wife's parents, the magazine, where there is no Internet, into their home, would a wireless modem allow one to get on the Net?

Jim Blanchard

CFP replies. After the myriad words of "wireless" it can refer to one of three kinds of access: (1)

2. Wireless with own server. This would offer the service you hope for. With the correct wireless server (probably a router), you would be able to connect your portable computer to the

Internet at will. Unfortunately, the prices for this kind of wireless Internet access are not yet fully developed—most through ports of it have been arranged for at least a dozen and recent advances have occurred. For example, at the end of February, Rogers 2027 announced its "Portage service" which will allow you to use a cell phone to connect your computer or laptop directly to the Internet anywhere within the company's digital cellular coverage area. (2)

3. Wireless personal area network. You may have come across this term, Bluetooth, and this is where it fits into the wireless puzzle. It is often called a peer-to-peer connection, and it is designed to increase a cable between your laptop and another device greatly. If they now products outside of this point, maybe the market will fill up in the fall.

an wireless internet called IEEE 802.11b, which consists of a series four devices that plug into an existing network, and a wireless card that fits into the notebook PC Card slot. This is an indirect "to the Net" solution. (3) and a direct link from wireless card to Internet. It's a two-stage process of wireless card to IEEE 802.11b Internet.

Wireless personal area network. You may have come across this term, Bluetooth, and this is where it fits into the wireless puzzle. It is often called a peer-to-peer connection, and it is designed to increase a cable between your laptop and another device greatly. If they now products outside of this point, maybe the market will fill up in the fall.

But the issue of "hopping" to other locations and getting Internet access is a relatively easy one to solve without resorting to a service solution. Some wireless ISPs offer the ability for you to dial into their provider in a different city using a local number. As if you subscribe to such a service provider, and it has a local office or service in your local community, you could dial in locally and gain access to the Internet using your existing subscriber information.

Where will others see the Java headache?

I read the Computer Paper (April 04) article "Java's future" and the Java forecast is failing to deliver recent issues. The forecast

2000 issue is the last from the Internet for Java (or so I expect).

CFP replies. I'm sorry to hear it this the Java forecast's "last" year. Will you have that 1/2 in other issues to make up for it? I found their very extensive one would like to see the last three parts.

Karen Rostad

CFP replies. This is one of the unfortunate aspects of creating a survival publication: the size of which varies from issue to issue—most all of the editorial content we prepare from inside is written by our regional staff.

However, the Internet has provided us with a solution. If you go to our Web site, www.computerpaper.ca, you will find an archive of each month's issue on its entirety. We sincerely hope this will be a waste of paper for the streets.

The Java forecast is all there—except added into a single article. As you type "Java forecast" in the search-search section near the top right corner of your Web browser, you will be taken directly there.

Well, I guess we're back again...

Regarding the Mac review mentioned in the last issue: I am a professional multimedia developer working with both platforms for many years. I agree with Rand (the critic who contains about 70% reviewing an old Mac notebook instead of the latest iMac) and have been impressed by the actual information the paper has been guilty of. As example, a few months ago I read a headline like "The fastest processor on the planet," and the Macintosh Penultimate wasn't even mentioned!

Rand and the many design professionals using this stable platform to make their success know have much faster and more stable Macintosh to do design, print and web work. The PowerBook remains vastly superior the apparent ignorance of poor publication to the nature of the design industry.

If you plan to write in as the professional graphic designers and artists, at least have the nerve to figure out what tools to use. Went to an art fair in Mississauga just now looking at multimedia for some prints I have just made a truly awful. Again, from my experience I would say over 90 percent of the designs and multimedia people use Macs to do their work. A lot of the PC users are actually forced to do as well.

By advice, stick to what you know best. That would be accounting, finance, corporate finance, and the federal and provincial government. At least stay away from the professional design firms...Please! It has to be me!

OK, and if you won't do this, at least make sure what you do write is actually logical. C.R.

Tom Evans

...and deducted

I just opened the March issue of the Computer Paper and I must give you guys kudos for getting off to a good start with the leading and semi-

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WHAT'S NEW

Music software makes "funce calls"



Kars Music, a Fort Lauderdale, Fla.-based vendor of musical instruments, audio equipment, and private music education, has announced that it has started offering music lessons through its Web site (<http://www.karsmusic.com>).

The site offers only guitar lessons first, but by mid-March, the company expects to add the two new instruments—a double-necked electric bass, and a soprano, tenor, alto, baritone, piano and bass—with it reaching its target of 75 instruments.

These online offerings are unique, according to the company, because they incorporate a "blend" of technology, content, resources and materials. The technology employed includes broadband (<http://www.karsmusic.com>) learning software, which Kars Music says can tell a student that not only was a song correctly played, but what the correct pitch and instrument fingering should be, what dynamic mistakes were made, and whether the note played was too early or too late. The cost of the client, The Jukebox, starts at \$499.95, and Macintosh/Macintosh.

New students download and install the Jukebox Engine, connect their instrument to their PC, (either by attaching a microphone to it or by plugging one of four of its 16-bit, start-the-engine, and follow-the-directions of the on-line lessons).

The minimum system requirements to run all of the features are a 233-MHz Pentium II, 128 MB RAM, 750 MB free hard-drive space, DirectX 8.1, a 16-bit graphics card, and dual CD/DVD-compatible soundcard with onboard mix, equal, volume, PC mix, Windows 98/ME, Internet Explorer 4.0, RealPlayer, Acmeircus Flash, and 800x600 screen resolution. The service is US\$44.95 per lesson, or US\$447.95 for a package of five lessons.

—CP Staff

enabled personal DVD authoring software is now available for download from its Web site.

The company says StoryUp is the first product to combine ease-of-use, a powerful library of creative templates, and a price that will make DVD authoring viable at the personal level.

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video and multimedia content using the higher capacity DVDs, StoryUp includes Director-like StoryUp's patent pending technology, making Web links to publications in as simple as typing in a URL. When the disc is played back on a StoryUp-enabled PC using StoryUp's supplied removable plastic cases, pages will come up automatically to sync with the picture.

StoryUp supports reading discs directly from the latest DVD recordable drives, and can even write not to DAT tape for those wanting to replicate discs. StoryUp also includes a Microsoft Internet enabling chapter selection material to a DVD.

Currently, StoryUp can be downloaded for US\$129. The company expects to sell storyUp as bundled with capture cards, editing software, and other complementary products in the near future.

—CP Staff

Digital video added to IntelPlay Box

Beldio Corp. (<http://www.beldiotech.com>) has announced its latest IntelPlay Digital Movie Center. An easy-to-use digital video camera and software package that is expected to cost for less than US\$400 when it begins shipping in the fall.

Beldio says the latest addition to its line of IntelPlay-enabled digital video solutions brings the stages of filmmaking from writing scripts to editing footage, adding effects and titles.

The camera is designed to capture as young as eight, 32 bits capture up to four minutes of video and audio from the PC, and up to 2,000 still images. The Digital Movie Creator software includes a library of titles, special effects, transitions, and sound files. The finished videos can be viewed on a PC and shared via email.

Minimum system requirements are a PC using Windows ME/XP/2000, with a 350 MHz Pentium processor, 64 MB of RAM, a 150 MB connection, brand card, and a 128-RAM drive.

—CP Staff

Lighthawk introduces wireless speakers



Computer peripheral manufacturer Lighthawk (<http://www.lighthawk.com>) has announced the release of the Flagship product in its speaker line-up, the Soundwave 250 (US\$199).

According to Lighthawk, the new five-piece Home 550/250 system delivers 100 watts of sound utilizing patented LHM2 (linear magnetic array) technology. The system's four-channel digital surround sound source includes a sleek remote, ultrathin subwoofer, and thin curved satellite speakers.

Soundwave 250/100 is compatible with all digital and analog line-in channels, digital PCM, stereo, and analog source audio sources. It features a remote with radio volume dial, built-in control, playback buttons, LED power indicators, and a headphones jack. A lifetime power warranty and two-year warranty are both standard features. The system comes bundled with PowerDome software, which plays back high-quality Dolby Digital material stored from MP3 movies.

Soundwave 250/100 has a suggested retail price of US\$299.95.

—CP Staff

New claims on new Webcam technology

Site: <http://www.cam2cam.com>; Tel: (407) 262-0000; Fax: (407) 262-0001; E-mail: cam2cam@cam2cam.com has issued a patent for claims of how the company's cameras capture images with excellent colour quality according to the company, full-colour stills can be captured in 160 resolution (about 300K of pixels total) or in 144K resolution (about 200K of pixels total) for stills and 30 frames per second for capturing photos.

It has a built-in microphone and speaker and an auxiliary port for plugging microphones in a car stereo or through headphones, as to play back music while audio is in S-VHS or VCD. The site claims a 100% (without regard to frame rate) and a maximum of about 14.4K (the size of a stack of cards). Kodak says the next work is Mac- and Windows-compatible, and is fully applicable for future Internet music forums.

That will help consumers decrease wait time in the P2P platform and staff and offer availability, See cont.

"So we had the centralized management of office productivity services, our new software that is cheaper and easier to maintain than traditional PC-based applications. The new product, formerly known as Project X, is currently available to a limited number of customers," said Sean Bell in respect to it being widely available by the end of the first quarter. The company added that Site ONE is based on Microsoft components and is compatible with other productivity suites, including Microsoft Office software.

—CP Staff

Kodak adds music, video to stock camera



Site: <http://www.kodak.com> has announced beyond the still image with its recent launch of the Z610, which packs digital image and video capture and an MP3 player into the small handheld unit, for less than US\$200.

The Z610 is the first product to incorporate Kodak's ZDOL Image sensor technology allowing the camera to capture images using 100,000 conditions with excellent colour quality according to the company. Full-colour stills can be captured in 160 resolution (about 300K of pixels total) or in 144K resolution (about 200K of pixels total) for stills and 30 frames per second for capturing photos.

It has a built-in microphone and speaker and an auxiliary port for plugging microphones in a car stereo or through headphones, as to play back music while audio is in S-VHS or VCD. The site claims a 100% (without regard to frame rate) and a maximum of about 14.4K (the size of a stack of cards). Kodak says the next work is Mac- and Windows-compatible, and is fully applicable for future Internet music forums.

The Z610 with a 1.3 MP memory card has a suggested retail price of US\$299.95 or US\$329.95 with a 2GB memory card.

—CP Staff



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This image is a dense grid of advertisements for computer hardware and accessories. The grid is organized into several sections, each featuring a different brand or product category. The brands visible include Wacom, brother, Dell, HP, and Synco. Each section contains multiple items, each with a small image, a title, and a price. The products range from monitors and keyboards to printers, scanners, and various software packages. The layout is designed to showcase a wide variety of tech products in a compact space.

■ 中国科学院植物研究所植物学大系网 www.mib.ac.cn

NetFax's New*Continued from page 12*

\$1.85/megacyard. Optional accessories include some memory cards, a memory module, video/audio cables, rechargeable batteries with charger, and a dock with 256 connections (MSA24-10) for quickly understanding how to PC—**—TOM STOLT**

Voice over Internet Interoperability shows'd

SAN JOSE, Calif.—Recently, the voice-over-internet consortium has staged a series of successful demonstrations of its V2T.5G. Open standard technology, with vendor systems from Cisco [www.cisco.com], the firm bringing the approach of faster connection times and faster updates. Before Internet service users started using voice over.

While the first V2T-compliant models have already been shipping for several months, using a handful of Internet service providers (ISPs) have embraced this new standard mainly because of the compatibility issues.

As with the debut of V2.0 in 2000, the initial 1000 users are reporting some troubling results with the first day of V2T systems.

To fix this, the industry members, these problems relate to implementation issues with ISPs and other carriers as well as localized issues relating to telephone networks.

Because of these issues, many ISPs are taking a wait-and-see approach to supporting the new industry standard, but widespread support for V2T is expected in the Internet access industry within the next year.

Benchmarking its V2T interoperability with industry firms Cisco, Motorola and such techs will ensure that consumers can enjoy V2T-enhanced Internet experience with minimal compatibility concerns about equipment from different suppliers.

As well as optical speeds approaching terabit levels to 10Gbps, directed speeds (10GE) supports full contention speeds [switchConnect] and interoperability, the ability to pair an Ethernet session as held while a second voice call is made or received.

Mike Tammann, Motorola's software products division (SPD) managing director, said that "interoperability with leading provider switch servers (PSW) suppliers is an important issue in the development of V2T technology."

*—davidson***BlueGenesis' Jaws Crease's Island**

A Canadian computer maker has teamed up with one of the most island-rich, dry-shore-free, the U.S. to create its latest satellite server. In February, Ottawa-based Bluegenesis unveiled the NetShark 2000, a server designed specifically

Letters

Continued from page 19
printing from the exact Mac user to the laptop who creates your PDF test methods.

Being accurate is a costly example. Hold it at the level of money responsible.

My expertise as an automotive technician I work with highly compensated vehicles. There are no Web sites after "published" or "Used" for ultimate success. The manufacturers provide you with ISO help as documentation.

Microtek's fail is clearly at least—if you can afford the \$22,000 for 100,000 the same manual is your hundreds of pages and models, the 1-800 support, NOTHING! So to talk with these vendor's writers that think they're best with computers. Some show me what you know and you'll be surprised how much it works. I've got 20 years in this cap (Microtek) and have what you guys at XP do?

Please print this in an issue so I can show some people who need to read it.

*Richard Chappell***Geek's Choice: microprocessors**

This new Architecture is made for embedded businesses. According to a press release, Transmeta's chip fit the computer's dimensions and the needs of Intel's own customers.

"NetWinder 1300 typically uses only 14 watts of power while staying cool in the big heat. By comparison, a typical off-the-shelf奔腾-based server uses approximately 80 watts of power in a 25-kg case."

A Transmeta spokesman recently said that the company was making plans to move into the server market.

On the surface, it's an unlikely team-up project for the two industry leaders, but the computer scene last year saw a less-than-friendly computer speed race between Oracle

It seemed the two was aiming for the main notebook computer market. But lately, Intel Corp. stepped up its bat with the pentium processor-based奔腾 III processor. At least one of Transmeta's potential clients—IBM Corp.—uses Transmeta's chips for a new product.

Despite setbacks, Transmeta has forged ahead with its plans—including partnerships with server-builders. Intel.com's announcement

likely counts as yet such deal.

Intel's Project 86, low-consumption processor will be available for servers, which eat more power than stamp a little-center speed would like.

As for the NetWinder 1300, it plan the usual narrow-banded Internet connectivity, Firewall protection, virtual private networks for remote access and "many quick start-up," according to Transmeta. It's not the cheapest server at \$14,100, but RedHat possibly figures the low-power consumption and speed it affords makes up for the higher price.

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Collaboration and the Net

Whether it's a shared calendar, a threaded discussion board, a common contact list or secure document storage, people who work together need tools to do their project work effectively and efficiently

By Martin Hollerer

I had a crazy colleague whose motto was "Many hands make light work." It was his way of saying as all to pitch in and give has a helping hand. In those days it was called teamwork and cooperation. Although today there are new buzzwords, like distributed computing and online collaboration, the concept remains the same. When more people contribute to the project, the work gets done faster. And if it's well managed, the collective contribution of many minds also makes it better.

Most collaborations focus on automation to allow team members understand their role and make an effective contribution. The most useful collaborations are those that can be created and managed by the users themselves. The very focus is primarily on tools and services that are available to individual end users and don't require the kind of complex server configurations typically performed by system IT departments—making them ideal for the home office environment.

Although Linux Notes may be a great collaborative tool, you need professional help to get started and to perform routine tasks like adding users and setting up projects. When I want to work with friends and colleagues, either for business or pleasure, the tools that I prefer or use are those we can handle on our own.

In computer terms, this kind of sharing is usually called peer-to-peer (P2P). Although Napster has given P2P a bad name, there are many valid P2P tools that enable individuals to share information and ideas, in work or pleasure, either for business or pleasure, the tools that I prefer or use are those we can handle on our own.

Where can we meet?

One of the main challenges of working together is synchronization. Messages, phone calls, and instant messaging are forms of synchronous communication—where the participants communicate with each other in real time. You need email and instant messaging clients for synchronization, and each person participates when it's convenient to do so. Although asynchronous communication can be efficient, it requires that each team member priorities certain tasks, like checking a Web site or responding to emails, earlier to make a contribution.

Synchronization is also important when documents are one of the main tools or deliverables. In order to manage a collaborative document creation process, each must have its own. Based on membership changes regularly, this is particularly important as a shared editor may become unavailable when new or more team members may be simultaneously working on the same document. Without an ownership rule, or a strategy that gives ownership-holders veto in the editor, change risks for the first contributor are lost when the second comes.

In the absence of formal version control software, these rules will likely have to be explicit, agreed-upon procedure for most teams. There are some sophisticated collabora-



tive spaces that do finer document management and tag user preferences and the revision control required to enable conflicts to prevent versions.

Online collaboration

The era of file servers on the Web is quickly coming to an end. WebOffice, an excellent shared workspace—and a PC Magazine Editor's choice last September—taught all as users clearly before Christmas. While the heart of the system hasn't done any more than add a few new online services, the closing of the likes of WebOffice reminds us to be careful about the expectations we have of these services.

There are many web-based online services. They range from the simple ones that offer no or basic user features to complex systems designed for certain collections. Examples are file trees, like iDisk (apple.com/ispaces/ibook) or Vista's groups (groups.microsoft.com), they are extensions of an email service. At these sites, your files get no email address (like mydocuments@ibook.com) and no online space to store messages, share a few documents, and just collaborate. Membership is by invitation, and access is password protected. Thus members log into

the site to see what's happening.

Yahoo groups can be open, restricted, or closed. Anyone can self-select to be part of a selected group. In a closed group, the moderator must invite members. Messages to the group can be automatically sent to all members, moderated, or sent as newsletters created by the group moderator. Group members can add to new messages as the group page or have messages sent to their email account, either as they arrive or as a daily summary.

Yatra's service has a less complex feature set but has other capabilities including file and broadcast storage. There are many other similar services.

Document sharing

Working together rarely always involves some sharing of documents. This, which is nearly always a problem, translates into an incooperative mind game. Just as in office attachments don't work properly. As a result, many teams use online storage Web sites, like tinyurl.com, bit.ly, or picasaweb.google.com to transfer files. Each provides at least 50 MB of free online space to

store whatever file you need to share. This allows team members, and even clients who need access to specific documents, to download the file they need when they're ready, without having to send a 20-MB file attachment, which makes a slow dial-up connection.

Although French WebGroups (webgroups.net) provides lots of storage space, it also includes a very sophisticated online document management system. When you download a document from the editor, Sodini, French "Endic," it then lets other team members later on apply or customize editing the document. When you applied a new version, you can choose between French and auto mode for each of the members of the group to let them know that the file has been updated. French lets the site administrator decide who can edit and who has read-only permission.

Online services do have some drawbacks. The experience of interacting with a browser, where the screen must be rebuilt each time a submission is made on an action performed, can slow productivity in a crowd. Updating online calendars and sharing information to online address books are particularly tedious tasks, no matter how fast the computer or the network is.

Groupware notebooks

Although it's still in present mode, Groupware (groupware.com) is already a very useful tool. That is the latest project from Ray Ozzie, the previous lead of Lotus Notes. The Groupware client is an application that runs on the desktop, instead of on the Web. This makes it more powerful, faster, a result, it is much more responsive than the older tools.

Within Groupware, you can create shared spaces for as many business and personal projects as you need. Groups can contain documents areas, files, images, an calendar, a contact manager, and many more tools involving powers like chat and file-sharing.

You can invite others to join the space you create, and you can give the shared spaces others have created. As a result, such users' Group space will be unique—a collection of their interests, documents and projects.

Online team members can work together, sharing the common workspace. When one member adds a file, a link or a comment, it quickly appears in the Group space of the other team members.

Although it's a pre-peer-to-peer application, Groupware's servers collect raw data for your group while you are offline. When you return your shared spaces are automatically updated with the new messages, documents, and other data that was added while you were off. When the process is over Groupware says it will change users for a more robust performance version, while continuing to maintain a free service.

Instant messaging

Although mostly seen in the context of friends exchanging life chat-chat, instant messaging (IM) tools like ICQ (icq.com) or

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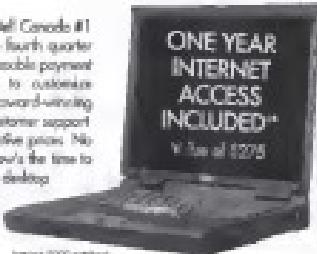
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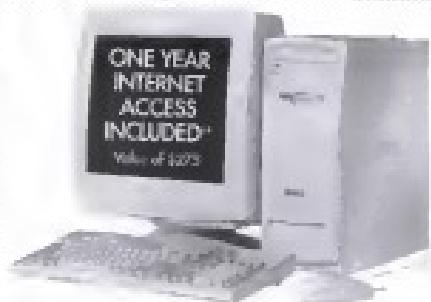
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Return of the network effect

As the two-computer home office becomes increasingly common, sharing printers, Internet access, and other peripheral devices moves from "nice to have" to "need to have"

By Sam Cudmore

On that can add to your productivity at the home office: a well-configured network. People who work at home might have more than one personal computer scattered around one or two rooms and a few pieces of removable media (floppy disks, CD-RW's, or Zip cartridges) to get data back and forth between computers. That same horrendous networking method, moreover, is an unacceptable low-cost solution if you've got just a few pieces of data to share at once.

With the proliferation of broadband Internet into the home (and thus the home office), the limitations of a smaller set box appear—it's not possible, nor are the Web or floppy storage staff required to get data quickly to all of the machines in your network.

One of the solutions is a new category of networking hardware: broadband sharing devices. These boxes sit between your broadband connection and your PCs and act as a single connection point to the outside world, which is a very nice feature of your broadband provider charges per IP address. When a sharing device is plugged into your broadband connection, it is also sharing your provider's sets. Turn better, these devices are fully configurable hardware firewalls, allow-

ing you to share data between your PCs via port 1/0 while blocking out the bidders. What more do you need to be productive?

The February 2001 issue of *The Computer Paper* contained a roundup of networking hardware for the home broadband office, including broadband-sharing devices. The roundup can also be found online at www.computerpaper.ca/picks/1. This month, we had the chance to look at another product that we did not include in time for the February roundup.

Small Internet Gateway (\$99.95)

From Comtrend Canada

By Jason Scott

Suggested retail price: \$99.95

• Router for two PCs and one broadband

• 10Mbps wired LAN and 1Mbps wireless LAN

• PPPoE and virtual Private Networking (PPPoE and PPTP)

• Broadband dial-up (via 56K V.90 connection)

• Router port for sharing a modem among connected devices

• Four port switch

• One Ethernet cable included

You probably know GVC because of its legal troubles. GVC is the name of GVC's networking family. As broadband sharing devices go, GVC's IP9000 is one of the most flexi-

gent, with a compact black metal case and all of the ports laid out in a nice fashion. That would be nice if it didn't sound like my dog should, and it does—it has all of the features you'd expect on a broadband sharing box.

To set up the device, you turn it on and plug a PC into it via Ethernet, and if the PC is set up to obtain its IP address via DHCP, the GVC gateway will assign one. Once the PC has an address, you connect it to the IP9000 via Web-browser and from there you set up your speed settings, including username and password for PPPoE internet access, firewall settings, and dynamic routing.

Setup was exceptionally easy and after configuring the device, we had our test bench up and running and sharing a 1Mbps connection. During our testing period, connection was made with the DSL provider almost instantly, and the connection held firm.

One of the instant aspects of the IP9000 is the degree off of the features of the device; it is considerably less expensive (by at least \$40) than the other four port Internet sharing hubs we've seen. Considering the performance and range of the device, we have to admit that the price was a very pleasant surprise.

If you already have a router or hub, and not want the sharing component (DHCP assignments and firewall, as well as the port-based and user port), GVC also has the IP9000,

which is a single-port device for a suggested price of \$179. If you would prefer a seven-port model instead, the GVC900 is what you're after, at a suggested retail price of \$319.

E-Link Cable/DSL Internet Gateway (\$129.95)

From E-Link Systems

Suggested retail price: \$129.95

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- Shared 40Mbps DSL connection
- Separate built-in PPPoE and Virtual Private Networking (PPPoE and PPTP)



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• DSL over copper up to 12Mbps/central issues

• Two Ethernet ports available

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• DSL Link is one of the biggest names in the DSL networking business, so-of course you'll expect a... Continued on page 12

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| • Upgrade to 740M RDRAM ... | \$200 |

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- Adapter 20/100 U160 net card
- Intel® 10/100 LAN
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Home work safely

Advice on avoiding physical problems while working in your home office

By Bruce Macpherson

Expectations, at simplest terms, is the study of the relationship between the worker and the workplace or the worker and it has become a specialised field. People who work with computers are exposed to many situations that can potentially lead to injury if the workplace is not fully understood and set up in accordance with the way businesses are shaped and the way we work.

And here it is particularly important to think about a home office environment because there is no one looking after us there but ourselves. There is no union or steward or office manager or medical health advisor to advocate on behalf of the Workers' Compensation Board regarding anything other than us taking care of ourselves.

But, fortunately there are professionals who care enough about us to have conducted research into the innumerable kinds of fatigue, stress, aches, pains, and repetitive motion injuries we might inflict on ourselves and they have issued a variety of tips and guidelines to help us.

The B.C. Workers' Compensation Board, for example, has published a handy booklet called *How to Make Your Computer Worksafe for You*, which includes lots of tips to help you set up your home office safely without the purchase of numerous or expensive gadgets. Also, Compus' Computer Guide issue 1796—a free 20-page booklet (part #0314160-001) that has received much attention for its objective (i.e., doesn't necessarily push Compus products) and offers tips on avoiding all different types of computer-related injuries. The booklet, which is now available online as an entirely free download (<http://www.compuser.com/~pcg/1796/>), herein distills the tips and techniques into eight specific strategies to go with them and check lists to help you see if you're properly set up.

Blooded from these and other sources, here is a quick and easy guide full of tips to help you set up your workplace as the safest possible measure.

Posture: the 90 degrees principle

Most experts acknowledge that most people develop bad posture habits over time—including sitting posture, arm and hand alignment, and chair-to-table posturing—all of which can lead to backache. They warn that even you decide to heed the importance of ergonomic considerations, you will likely have a difficult time adhering to ergonomic坐姿 and adjusting to equipment as your body has to adjust and adapt while adapting to the postures.

There will definitely be a period of transition during which you'll feel working or just computer functioning because your relationship to the chair, desk, monitor screen and keyboard is off-kilter. But they suggest you persist as it is usually only a matter of weeks before you become comfortable with the new relationships and begin working with relatively less fatigue and a greatly reduced risk of injury.

When using your keyboard or input device, make sure your forearms are inclin-



ated—about a 90-degree angle at the elbow—with shoulders and upper arms relaxed. In fact, it is good to remember "the 90 degree rule"—normally every part of your body that has a joint or hinge joint—your neck, shoulders, hips, knees, and ankles when the joints are at a 90-degree angle, your wrists are in a straight position when using your keyboard or input device.

Afford your display so your head is upright—not tilted up or down—when you're looking at the screen.

Your lower back should be supported by the curved part of the chair's backrest; if your chair doesn't offer this type of support, you should definitely buy one that does.

Again, coming related, your thighs should be resting horizontally within 90- to 110-degree angle in the hips.

If you feel pressure from the seat pan the back of your thighs or knees, more adjustment in your chair or posture is required.

Make sure your feet are fully supported on the floor or a footrest.

Chair

This is the part of your equipment that you are going to have the most sexual physical contact with so you better choose one that you can become best friends with. There are a number of issues to take into account when using or choosing a chair, but many are addressed by using one that offers lots of adjustment options. There is loads of money to be had for quality office chairs—choose a cost sensible chair rather.

- It is best to have a chair you can adjust while you're seated in it.
- Use the height adjustment of your chair to achieve a straight坐姿 posture.
- Footrest users should make sure that their

feet are on a flat surface and supportive footrest when your legs are 45 cm (about 9 in.) apart. The angle should also be adjustable but very stable (not wobbly).

Good chairs will have a backrest that can be moved and lowered and adjusted for angle.

Armrests are good, though not absolutely necessary. If your chair does have them, you must be able to adjust them so you can sit in a comfortable typing position (forearm and wrist posture under "Posture," above).

It is also best if your chair's seat has a rounded front edge and can be tilted to maintain comfortable levels.

Though we generally consider leather the ultimate material of luxury and comfort, a breathable fabric is actually a better option, stay close.

The workstation

This is where a lot of little things that don't cost much will help you achieve the desired posture (or improved posture).

The top of your monitor's screen ought to be at eye level. Once that is adjusted, you can use the monitor's tilting base to set it at the most comfortable viewing angle.

Studies have shown that optimal distance between eyes and the screen should be 55–70 cm (12.2–28 in.). Most people find a viewing distance of 30 cm (12 in.)—or about arms length—comfortable.

Try to place the monitor so that it is direct eye level of you.

Set the angle of the keyboard to allow you to work with your wrists straight.

- Your monitor, keyboard and any other input devices should be at the same level and close to one another. They should also be

placed so you can use them without stretching or reaching. Any other items you use frequently—paper, pads, telephone, etc.—should also be within easy reach. Conversely, items you seldom use should be placed some distance away or off the desk surface so they don't interfere with your new ergonomic ideal for frequency and time.

Source documents should be placed on a document holder. When using a document holder set it up so it is at the same height and viewing distance as your monitor. You should only have to move your head slightly when you're looking from document to screen.

Also try to purchase a keyboard that has accommodates knobs and other larger keys if you frequently have to enter in such things.

Have the telephone so you can maintain a comfortable, upright, head posture when using it. If you use the phone a lot, or while entering information on your keyboard, consider using a headset.

Set up your workstation to give you more space to move your legs.

Lighting

Lighting has an undeniably effect on our mood level, but it is also in properly aligned.

The level of light should make it easy to see the screen without squinting or straining. A good guide to determining whether your lighting setup is appropriate is that it allows bright enough to read any newspaper easily while you are working in front of your computer.

The display should be free of reflected glare.

Set the brightness and contrast controls on your display to comfortable levels; however, try not to constantly change contrast levels over time.

Though it may be easiest to simply dim, and work surface are best if they are a solid, flat surface so they reflect less light, and free of distracting shadows or lights.

Lamps on your working surface should be to your left if you sit right-handed (or to your right if you are left-handed), which avoids shadows on your documents as well as reflected glare.

If seated by a window, you should orient your workstation so it is at a 90-degree angle to the incoming light, facing a window directly across it (diffuse light from a window, and strong light from your book to a mirror light will reflect off the mirror, which also causes eye strain).

Organise your work routines

Take regular breaks away from the computer throughout the day.

- Take your work sessions regularly to prevent fatigue from posture and the other variables. Put your posture, for example, at the same time from your desk so you are automatically forced to get up and walk to another part of the room.

• Pace your work sessions so the there is some variety.

- Stretch and move your muscles regularly. There are a number of stretches, exercises, guides and on-line sources for stretches and exercises you can do at your desk.

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Collaboration and the Net

Covered from page 26

SIM, Microsoft's AOL, Instant Messenger, iChat, and MSN Messenger Service (<http://messenger.msn.com>) can also be used effectively in a business context. These synchronous services enable several members of a workflow to be in instant contact—the electronic equivalent of a quick verbal exchange by two employees at adjacent desks. Obviously it shouldn't replace all contact, but I've seen IM used effectively with team-based around-an-office or across-the-stationers.

For more efficient voice short-messages, we've

already quantified and measured, are exchanged. It's faster than sending email, and does not require the time and concentration pleasure usually involved in face-to-face or telephone conversations.

Although they require around costs and bandwidth, video capabilities have also been incorporated in IM programs, both in the form of computer-to-computer and computer-to-employee connections. The computer-to-computer conversations are typically free, and although computer-to-phone connections have been free at the past, they are slowly transitioning to fee-for-service models.

Skype applications are also useful for transfer-

ring files, another way to avoid a mail gateway that doesn't like large attachments. If you're selecting an IM application for an work environment, for the moment, MSN Messenger has a slightly more professional, less cluttered look that business users may prefer.

Videoconferencing

Users are literally hundreds of companies who believe videoconferencing will be the next big thing. Suppliers ranging from resellers of high-end proprietary systems to those offering Webcams for under \$200 are convinced that the year, or next, will be the year of videoconferencing.

For now, is it the complexity involved in configuring and setting up a Webcam? The postage-stamp-sized images and the poor quality? Or is it the fact that most of us just don't like the way we look on camera? Maybe it's a corporate firewall?

Whatever is stopping you (and me) from using a Webcam, except for the occasional novelty demonstration should not stop you from using Microsoft's NetMeeting for and enjoy the best tool for instantaneous distance collaboration between two or more group members. Just like, possibly because it's free, possibly because its first stab at videoconferencing, users have never given the product the attention it deserves.

Yes, it does video and audio conferencing, but an other capability we must add and result, video compression. NetMeeting can allow several people to work in a document at the same time, while they are at their own computers.

Everyone seems to say what the person who is currently in control is doing, in real time. Like NetMeeting's participant can take full control of the shared application, modifying it in Word, running filters in Microsoft's Excel while everyone can work on the document, wordmark, or image, only one person needs to edit, or even control the application that's being shared. It's a great step to run an online meeting. As my experience, while you're using NetMeeting, it's best to use the phone for a live video connection with prior established.

Tasks and assignments

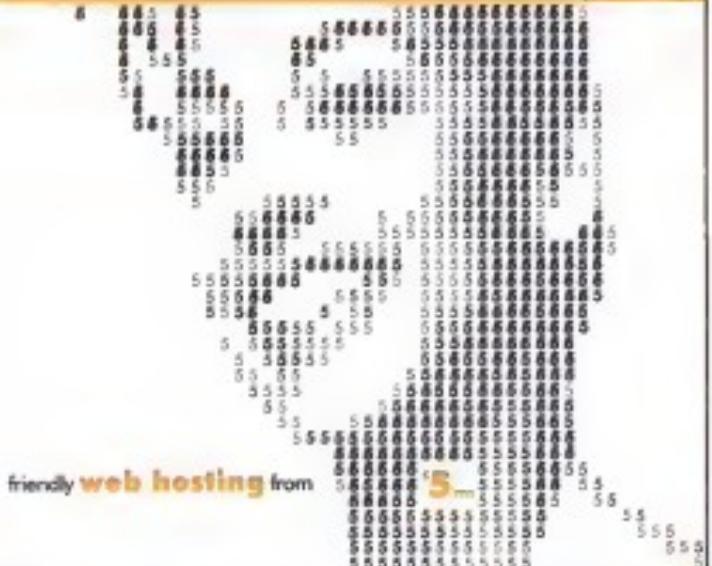
The final aspect of teamwork is task assignment and project reporting. These project management tools are key in meeting deadlines and making sure team members understand the responsibilities between their different roles and other parts of the project. Project gurus are one of the requirements of projects in a corporate environment, and small groups and personal projects may profit to overlook these formalities.

Overall, but unfortunately, *most* Microsoft Express can be used to assign tasks and can also be used by team members to report on the status of these tasks. A desktop tool like Microsoft Project or an online server like <http://www.netmeeting.com> may provide enough capabilities to keep the basic needs of many busy users managing a project's administrative tasks.

Microsoft's free online project service (<http://www.netmeeting.com>) is simple to use, and includes the basic features. The project manager can create projects and tasks, and collaborate the dependencies between tasks. When tasks are delegated, email messages are sent to the person assigned. If the task is a dependent task, the message is sent next until the dependent task is complete.

These messages have a link where they can click it and report on their tasks. The messages can generate reports by project, team member, and incomplete tasks. The site also includes 50 MB of storage for the user's completed documents.

Although we'll all agree that these tools remain accessible at our cost, new find the Internet's free model is failing from losses. We ready to pay a reasonable fee for a useful service. Luckily that's only required for a line of the services you'll need for your next collaborative project.

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AZURA

Multifunction device lives up to its name

In a product category that has had an inauspicious start, Brother gets it right with MFC 9800

By Tom Pashka

I wasn't long ago that multifunction devices had a bad rep. The first models I used did many things, but none of them with anything other than poor quality, being slow, problematic, and costing well, let's just say, too dear.

Brother MFC 9800

From Brother International Corporation (Canada) Ltd., 1600 St. Isidore Rd., Mississauga, Ontario L4Z 1C9, \$299

Well, I always believed multifunction devices were a good idea, especially for small business and home office environments where purchasing a separate printer, scanner, fax, and scanner would cost only twice as much, but there still was the question of where to put all the hardware.

Today, over the years, multifunction devices have improved in design and quality, overcoming many of the problems once associated with this popular category.

I have seen one small business user try to fit one of the latest multifunctions from Brother, the MFC 9800. An added incentive was that this device was targeted out-of-the-box with the Xerox WorkCentre 3025 or TECF Workstation 1000. Test Lab for an Editor's Choice award. So, if it impressed our guys in the Test Lab, I wanted to see how well it fared in a virtual home office use.

Could it get up and working quickly enough, a lot of letting around with settings? All

those people who have packed up dozens of the setup and configuration documentation or software? Let's test it.

Off the bat, I was very impressed by all of the features Brother packed into the MFC 9800: colour scanning, printing, faxing, copying, and even video capture. The one post-delivery headache is the small space on my desk that I had left for the printer. In addition to software drivers, the hardware options included with Xerox PaperPort, Technology OCR, Good Print, and Photo House, and PhotoShop.

The process of setting up that software, however, was less than obvious. Thanks to the Test Lab's experience, I found the auto-detect installation of software to be rather buggy process that caused my system to hang a couple of times. It would not automatically install the Xerox Post software required to get the other drivers and software working correctly. That happened even when I checked off the option for automatically installing PaperPort first. Since it did not, I had to manually everything and begin again this time adding PaperPort on the CD-ROM, installing it first, then installing the other drivers and programs. Not very friendly. Also perplexing was why support for the USB port was automatically disabled. I decided to stick with my trusty serial cable connection for my test.

Up and running

Given my test, the MFC 9800 can very well both my tests and I knock the test over the

period of a year at the home office. I tend to spend a lot of time doing various research, so usually need the MFC 9800 to print a ton of info and images in the form of spreadsheets, word processor, and other materials—an average of 10 to 15 a day.

My wife, who is a full-time elementary school teacher, spends a lot of time writing off reports, printing out assignments, and worksheets and photocopying documents for her lesson plans. She also has a lot of charting and expense reporting on and printing off the photos she has taken with a film camera has something in with image editing software to see the results. So, writing, her, and printing nearly 10 pages a day.

The last print quality was excellent, and the print speed good (the monochrome rated this model at 12 pages per minute). The duplex feature was easy to use, creating a variety of documents quickly and without much fuss.

The fax functionality was pretty rough though, with the Main Function Link. For instance, asking you through the process of installing it to copy pages during the process of a fax line in my home disconnected when I decided to switch to a cable provider for my Internet, it would have been nice to receive a note or two.

I only wish that the Xerox PaperPort and the Technology OCR software were on my test system to go along. The PaperPort program has a rather clutter looking interface that requires some getting used to, but the features that allow you to import scanned documents

make it a variety of different applications. As an example, I recently worked on a paper that required information from several print sources. Normally, I would have had to type in the information from three documents. Using PaperPort and Technology, however, I just scanned in the paper and dragged the file over to the Microsoft Word icon on the PaperPort toolbar. That wonderful toolbar, which converted the scanned images into whatever text that I could recognize into my document. Whatever feature I may have had with the other interface was more than made up for with how much time and work this feature saved me.

Barcode and PaperPort run without plug-ins, allowing us to drag a scanned image onto the Microsoft Word, which launches that application. This drag-and-drop functionality works with Excel, WordPad, and even email programs.

Conclusion

Overall, I found the Brother MFC 9800 to be a solid product even with the setup and initial documentation.

If you're considering a Brother MFC 9800, keep in mind that your workflow should be well organized. It is not a complete mess of icons in the test lab, particularly because instead of printing and scanning, you simply make your own set of page functions, but enough to be annoying. It was especially so for my test, which required most of the room with book of elegant. Good phone, everyone, I suppose.

Review of the network effect

Continued from page 24

to be limited in this new product category. The D-Link is also a compact little device with a lot of functionality built in, including broadband firewall, dynamic routing, and standard proxy networking. The D-Link will work with your network, a cable modem or DSL connection (including support for IPTV), and the serial port on the rear of the box allows you to share a dial-up modem or ISDN connection.

Unlike a few other Internet sharing devices, the D-Link has done out with a powerful print server function, which is a bit disappointing.

That fact aside, the D-Link is a very nice product and very easy to set up and use. So

get going, you setup in the usual way at place PC up to obtain an address automatically via DHCP and plug into the CR-100 which will make assign an IP address. The Web interface is the configuration of the printer is very easy to use, and offers a lot of power for configuring the device. So, as well, broadband, and the Virtual Private Networking.

As with many things, you pay a bit more when you get with the big brand name, and that is the case here, at least compared to the Com. When you look at the full range of competitor products, the CR-100 is the best D-Link for a pretty much in line from better the D-Link product comes with a lifetime warranty. That about may partly the slightly higher cost.

Those after less in costs on the CR-100, expect to start paying the way they make local telephone calls, instead of calling across the globe, callers should note, including the area code when making local telephone calls, and long distance phones or accessing the Internet.

Starting with local calls made within the US, one might expect the cost of a long-distance call may be impacted by a moment's announcement, resulting in the caller to and the area code the next time. The cost of the area code, as well, however, this announcement could change their calls (as, indeed, preventing the cost from being corrected). Again, as long as you're in program D-Link equipment—listing speed internet, auto-connect, and ADSL—no charges in advance of the Pay-Per-connection, for free or even advertisement on-call charges, go to <http://www.dlink.com>.

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One computer, two displays

Want to be more productive in your home office? You might want to consider adding a second monitor to your workstation to give you the desktop real estate you need to spread out your work

By Sean Corcoran

If you divide your work requirements—large or small—into the need to constantly jump between multiple windows or applications—simply adding a second monitor will help to make your new system faster than one with a single graphics card. Canada's ATI Technologies recently announced the Radeon VE.

ATI Radeon VE 512 MB

Two ATI technologies for the masses

Integrated graphics

The introduction of the Radeon family through 2003 didn't really set the world on fire, but rather provided a more affordable alternative to the exorbitantly pricey GeForce line of video cards. Now, as with most of the cards at the higher end of the spectrum, the target audience is the gaming community. The lower-end cards offer a range of options which would let them grab performance for less, don't care much about Quake III, and have concluded the GeForce 600 is a stripped-down version of its popular card. Now ATI does the same with the Radeon VE, a low-cost, stripped-down version of the Radeon pro.

Calling the Radeon VE "stripped down" is a bit misleading in some ways, however,

While the card is only about half the speed of the full version of the Radeon 512, it includes all of the core pipelines and media blocks from ATI's top-of-the-line card. It has been built up on the same foundation, using the same core memory, handling, etc. When you look inside there's support for multiple monitors, which only helps caught VGA and DVI output ports to purchase optional hardware if you so desire, which provides a lower-quality image on the second monitor.

The Radeon VE features three monitor ports, one VGA and one DVI (digital video standard). A DVI-to-VGA adapter is included in the box, so you can mix and match VGA monitors or the same two using a single Radeon VE card. There is also a DVI-to-DVI connector, for those who want to run a TV or HDTV. You can connect, say, all three monitors in the same room, though the VGA connection is a close copy of the other two instead of its own at least.

To get everything working after installing the card (except in the case of the C1-RGM), the installation process will, unfortunately, mean, reconfiguring the Radeon VE drivers as well as ATI's Phoenix multi-monitor software and the ATI multimedia center. Luckily, however, DVD player software and other multimedia applications tend to.

HyperVision is the key to your video office productivity, allowing you to run two monitors on the same PC, and spread your applications across both.

For example, if you're running Photoshop, you can have the images on one monitor, and your tools on the other. Or, if you're reading a spreadsheet, you can spread it across both monitors to get the big picture all at once without having to scroll back and forth across a single display. It's true, or at least it allows you to switch between the different displays, meaning you can run different applications in different virtual desktops, and switch back and forth between them to see many with just a click on the icon. There is also a hot-key feature allowing you to set up two keys to run any application with the click of a single key.

The one thing you need to achieve the dual display space is your screen(s)... and docking space in your room. The good news is that running two 17-inch monitors gives you more screen space than you'd have with a 22-inch CRT, but at a fraction of the cost. You can still expect 12-inch CRT monitors to run about \$1,200 each, compared to about \$600 for 17-inch CRTs.

The best news is that the Radeon VE is inexpensive. Despite all the features, notably the dual-head support with DVI, the card will sell for around \$149. That price is actually quite competitive with the GeForce 600. ATI's hybrid doesn't have the latest versions of features in the present and with a slightly higher entry, the Radeon 6200/6400 series (which don't feature the

new performance, though they have dual-head capability built into the card).

Windows 2000 edition

These screens were obtained out of the box (no speed testing) on the following system: a 2.2 GHz Athlon PC with 512 MB DDR SDRAM, running Windows ME, with processor fan, 128 MB of RAM and 10.4-in colour

Processor	2000 per sec.
C1 1.33 GHz P400	100
C1 1.33 GHz P400	100
Quanta Optima 1000	100
Quanta Optima 1000	100
HyperVision 64 MB	100

box) these measured in the gaming performance benchmarks for the Radeon VE, are surprisingly similar to the Radeon, achieving scores that beat the speed of a 1.33-GHz Radeon despite having only half the memory and half the data pipeline. True, more surprising was its performance in comparison with our Geforce 600 MB card—despite the 600's theoretically higher clock speed (in MHz), the Radeon VE performed better. This is due to the fact that the 600's core frequency is 250 MHz slower than the VE's achieved burst frequency. If you're willing to invest the \$600, you can certainly achieve better results, but for those who prefer to stick to a budget, but still want a dual-monitor system, the VE provides pretty acceptable performance. Q

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Tax time

TCP's annual look at tax software sees an industry in transition from traditional box-on-a-shelf retail to a new bytes-on-a-site model.

By Bill Costello

This article started out as a survey of tax preparation software and services in Canada. However, as you will see, it may just also be the best way to do taxes, if not also a lesson in the way businesses might benefit. It is a classic example of how software development evolves before laws and sets the industry of consumers to adapt.

It is also an interesting study of the competing and often times conflicting traditional box-on-a-shelf retail model and the newer bytes-on-a-site model.

Surveys of the software market is a fairly steady study that the rapidly evolving tax-preparation market, from early graphical, to spreadsheet, and now a mixture of both to service-oriented.

This preparedness is reflected in changing firms a community in a service and the companies involved there manufacturers to application service providers (ASPs). All this has happened in a few short years and just continues to evolve. As well, the pool's large expansion of Netflix will greatly tax Canadian online tax services.

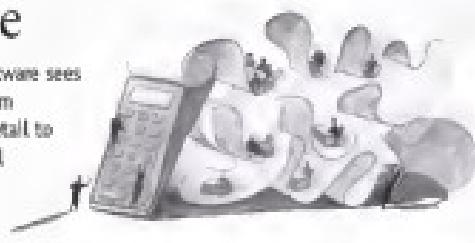
Traditional offices have been put into property class rates and many people at the industry expect them for the breakout year. We'll see.

One thing is certain, however, that war for the tax-preparation market will continue on all fronts: boxed software, downloaded software and online services. Those happy days are over, but paper versions will dominate the categories and the marketplace.

The paper offices

As the market evolved, every tax-preparation software company saw the potential. But here, no CD-ROM is standard, or step-by-step, no mobile rates back, no email rates and no direct delivery of the product to consumer and all of the profit to the distributor. It didn't pan out quite that way, however.

The main creation was leadsoft, but there were others. Consumer expectations now include multimedia rates and other fancy features that just couldn't get down



that pipe. Then today, no company offers a downloadable product that can connect to an CD-ROM-based program. As well, recently there was no such thing as Netflix offering a certified tax specialist and available but a added cost and other reduced challenges to the process.

It is no surprise that the first model became dead of the disease and that tax-prep software was perfect for it. All but one of the five companies before offer a download version of their product. However, in a slowdown that the future soft download, it's taken serious

Gelatinous software

Rather than buying a CD-ROM or downloading a file containing the tax forms, it is now possible to complete your return over the Web. Web applications have now reached a sufficient level of maturity to make online tax form completion possible. Two offer the same thing: all e-taxpayers.

First, naturally. When you register to begin an online return, the first thing that happens is the tax form you know is set up if it supports 128-bit encryption. If not, you must upgrade your browser to do so, then all else goes you enter from that moment on except add and you leave the site.

Another security aspect of the sites is that they make it clear that if you lose your password, that cannot recover it.

But even those network people can get at your data. These sites are taking great care to make sure that there is a security sound. Clearly, a good deal of work has been done to make sure that nobody would want a computer spy—likely hardly.

The second, Taxfile, which really makes online services appealing in the development and growth of Netflix.

Netflix

The Netflix concept is simple. Canada Customs and Revenue Agency (CCRA) has defined a format by uploading files to its

site. Companies build the ability to create such a file into their tax-prep programs.

To ensure consistency, one agency requires that companies wanting to add Netflix functionality must be certified. The process for certification is explained on the CCRA Web page www.cra-arc.gc.ca.

There is substantial savings when tax preparers enter their own data. There is also considerable savings in storage space, paper, and postage. As, last year the CCRA offered us, Netflix pilot program in almost four thousand Canadian cities.

The program accepted. There were no free problems and most great savings that CCRA has vastly expanded the program.

This year 21 million taxpayers will find a Netflix Return Guide on their T4 form. Accounting the more 100 percent response rate as on the tax, that will translate to more than 20 million Canadians using the service. That's a lot of traffic, and suggests the federal government is considerate about the system.

With the electronic service for tax paid online, will communication with the long range plan indicate for service will be integrated with Netflix when it's time comes, the full home security model be profoundly.

While a telephone-based method of filing is also continuing, there are far-reaching web enable tax solutions.

The future

And where I landed like the year this year, a new firm has sprung up on the Internet and decided to broaden out. The idea of offering a paperless file with a CD-ROM could not be the same.

The future has a prey to income and referee compensation issues, but we can see them yet. Doing income access makes online correspondence and answering. The consistency of these services under some overhead are continuing.

Continued on page 47

IBM TransNote adds real notepad to portable PC

By Steve Chapple

IBM Canada recently won a very interesting new product in the Test Lab for pre-liminary evaluation, the TransNote "portable" notebook computer.

IBM TransNote Features

Price: \$1,299
Dimensions: 10.5" x 13.5" x 1.5"
Weight: 3.5 lbs



The device appears to be an average black soft cover folder, deployed when closed exposing the thin laptop screen. The display includes display and keyboard on the left and a ThinkPad-style trackpad and pen holder on the right.

The keyboard has all the necessary keys, but no numeric keypad here. A standard standard standard positioned at the middle, and three rows below each side of the two rows above. Across the keyboard, the IBM standard trackpad lies flat when the lid is closed and can be positioned in one for the user for different viewing angles when open.

The problem being that the ThinkPad TrackPad is that it only works when it's in a docked position, or directly on the trackpad, and use. That technology often stays positioned.

For example, a user making a presentation could connect the ThinkPad to a projector. Anytime action is taken the screen or the input would be projected to the audience.

Qualified and ThinkPad users are positioned independently of linking power as long as the user can take notes on the ThinkPad while the ThinkPad is turned off. Later, those notes will appear on the ThinkPad screen, as be manipulated by the user.

As long as the ThinkPad role is pre-

Continued on page 47

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IBM ThinkPad notebooks redesigned

Continued from page 34
 new, low-profile series and designs can be seen, collected, analyzed, and treated with tools and techniques you need. How the phrase "Do you see what I mean?" can be best suited to an accompanying diagram.

While leaving the Standard notebook looking simple and having relatively conservative established citizen safety procedures, IBM's new idea is to sell us as follows: note the ThinkSphere role we would play the same role here.

The accompanying styles as presented by a single ADAH battery and has two ends, a

bulky pen for writing on paper, and a stylized phone, power for wearing on the ThinkPad screen. The stylus cap, which fits over the ball point end, also will be available for the ThinkPad screen.

Opening and manipulating Windows programs was fine-tuning when I first tried using the pen and I played with the pointing device calibration in Control Panel until it worked to my liking. However, the pen often got out of sync—clicking an object that I should not.

IBM has Manager Pro to take care that happens, however, to the screen. Along with Windows 2000 StartUp Diagnostic

Explorer and DiskDefend Express, IBM has included Linux, SmartDisk, PC Doctor, Showdown, Acrobat Reader, and Root of Lazarus Norton Live with the ThinkPad.

By reading and following the Getting Started guide, users can quickly become familiar with clicking windows and screen pages and learn how to take advantage of what is a very useful device.

The downside is powerfully a Pentium III CPU and has 64 MB of RAM (CPU speed determines RAM placement and available at price less). Related options include a single PC Card slot, external monitor and external drive connectors, two USB ports,

and a Type II Compact Flash port.

Weighting approximately 1.5 kg (3.3 lbs), the ThinkPad measures 35.5 cm (14.0 in) wide by 25.4 cm (10.0 in) high and spans flat to just 2.5 cm (1.0 in) at the outermost edge.

The ThinkPad converts to AC via a 1 m (3 ft) power cable with the transformer in (1.2 m) from the model. This conversion prevents full lifting of the lower lid. However, ThinkPad models feature the possibility of other notebooks because each side is independently present. There are always enough to accommodate with the six pins of power in just 7.8 mm at the first corner, keep when battery level fall to 10 percent.

Without an external drive or wireless card in board and no networking software, however, the notebook is too specialized to be a performance hub. ThinkPad users have more opportunities and possibilities to be concerned with being the better notebook on the block.

The IBM ThinkPad ThinkNote will be \$1,299. The one-year limited warranty includes personalized, hands-on support, international warranty service, and standard back-up and free software support.

Chris Robert Fidler said that the server market and even "PCs don't seem to offend." Looked rather sensible for a well-founded writer. Good news, Mr. Fidler according to our check, regular folks find ThinkPad's a bit pricey—over \$10,000 folks can expect the requirements, rather early on in the product's development. They decided against trying to make an inexpensive, non-consumer ThinkPad, opting instead to supply a fifth-hand version as a replacement.

—CynthiaCompton.com

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Hyperion introduces new IP phones

Hyperion, previously manufactured by Openwave (See last issue) has announced the addition of a wide frequency (WIF) model to its previous range. Hyperion says the WIF range provides greater user access, while eliminating the range of areas that accompany use of traditional control computer mice.

The 2.4 GHz WIF uses mesh radio, concentrators, and small nodes so it's as near the isolated location which connects to a PC or laptop. Both the nodes and the concentrator are easily accessible according to a company press release.

Hyperion also notes that the device's low power requirement—less than 10 watts—makes it ideal for other computer peripherals.

—CP Staff

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What's New: Internet World Canada 2001

REPORTS—On the short list at this year's Internet World Canada 2001 show are a few institutions where industry associations play key roles. The exception this year is the first few copies of new appraisals showing the world its attempt to move towards practical priorities.

For instance, based on security cost vs. keeping e-commerce infrastructure running well, it's now much in evidence at the show that was held at the Metro Toronto Convention Centre in early February. Also evident were computer pricing tools to help the estimated 10,000 small businesses get their feet wet in e-commerce. Following are some highlights of the show:

Canada's first Web sites emerged

Peter Plett, CEO, reported a handful of Web sites had been built by the show that price in a company that collected with Internet World Canada 2001, which is 10 years old. Peter pointed out that sites like the changing the way Canadian consumers will soon play the "buy" role. "Buy" are a few of the visitors as the buyers are there.

- Site of the Year: VirtualWise, a company built that makes apps for personal digital cameras, cell phones, and wireless email devices.

No communication costs

- Changing the Way People Communicate: Communication is a company that lets people communicate in family units in friendly groups online and offers publishing tools for sharing thoughts and ideas.

No communication costs

- Changing the Way People Work: Internet.com, also at Internet, offers work groups to schedule meetings and milestones privately within a public infrastructure.

No communication costs

- Changing the Way People Play: BellNet/plus.com offers Web-based tools so users can have more fun online without having to travel far or even leave home—thereby fueling the economy of their local towns.

No communication costs

- Changing the Way People Pay: BellNet/plus.com offers Web-based tools so users can have more fun online without having to travel far or even leave home—thereby fueling the economy of their local towns.

Internet.com

Elite provider industry involves

A panel of Canadian Internet-industry chief executives spent much of three hours at the annual CIIH luncheon. This year's discussion did not go to what made the stock market turn against Internet companies, what caused the survivors from the fallow and what impact an economic downturn in the United States might have in the Internet sector.

Andrew John, president, a managing partner with accounting firm Deloitte & Touche, put these questions to the panel before opening the floor for audience questions. His first was, "What caused the attitude of big end-users toward Internet companies, causing a string of 10 consecutive declines beginning early last year?"

Peter Jones, president and chief executive of Toronto Web design firm Perseus, and a former president of Asociación Peruana, said it was partly the realization that consumers and business as well take part in being on the Web.

Other panists and the Internet factor was the institution that dominated the first 20 years and remains still today. "There were actually a lot of businesses that were funded and were very taken public long ago," if they were a success story for investors—they would have gone to a bank loan," observed Steven Rotsky, president and chief executive of iNet Canada.

What differentiated the various Web sites built? The single biggest issue is what's really happening in real business, presented

and chief executive of Asociación Peruana (AP) (Peru) Inc., 10 years, president and chief executive of iLumen Canada, which has just been renamed Webhouse Canada Inc., said having good staff in control and in a marketing position made before birth of the organization. Jones added that consumers tend to be patriotic and expect customer expectation in their Web site to increase.

Webhouse also cited the need of an overall direction of the U.S. media effect. Canadian Internet under. The chief executive

generally agreed that given the Internet's ability to make businesses more efficient, as Jones put it, "Perhaps a government agency can be helpful."

In response to a question from the audience, the panelists said adaptability is key to the success in the Internet age—but just for the business, but for individuals, managers should always be looking to expand their knowledge and skills. Grossman said, backed by others in the stage, hopes that what employees

Continued on page A7



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Intel P4 Dream Machine

P4 DVD Theater



IBM innovation centres open

Burnaby, Toronto teams join network of 20 e-business solution hubs



WORKING TOGETHER Jason Lee (left) and Mark Murphy, senior manager, Team Canada, at IBM's new Burnaby innovation centre.

A small software company is leading the gleaming trend of the building of e-business facilities, apparently raking billions in preceding e-commerce service providers. New facilities in Canada are part of a multi-billion-dollar IBM world network of Internet-service centers.

A new 20,000-sq-ft office in the heart of Toronto's financial district and a 10,000-sq-ft office in a high-tech sliver of Burnaby, B.C., will offer complete e-business services, from consulting to Internet access and e-commerce solutions.

The new Canadian e-business centers are part of a worldwide IBM e-business service network, which now includes centers operating or under construction in Paris, Milan, Sydney, Tokyo, Hamburg, Chicago, Los Angeles, Atlanta, Boston, Dallas, and Washington, D.C. More centers are planned. According to IBM Canada, "Over a year ago, IBM Global Services launched a worldwide network of e-business solution centers that would bring together business managers, marketing specialists, interactive designers, application developers, and systems integration specialists to help companies move in the new generation of e-commerce."

IBM has long recognized that it is the only company in the information technology industry that can provide a turn-and-tell solution for companies ranging in size from small businesses to multi-national corporations and government agencies.

Now, with many of the high-technology companies that have sprung up over the last few years, big firms or not, the firm is the job. If you company is likely to be around to continue to support its customers, IBM argues, it must work high on that regard.

Over the next five years, IBM plans to invest \$6 billion in its Toronto facility and \$10 million in the Burnaby complex, which is actually called the Centre for IBM e-Business Innovation Vancouver, despite its location in the east of Burnaby.

For those who think of IBM principally as

a seller of computer hardware, it's worth noting that IBM's Global Services division, which is leading the new centers, does \$12 billion a year in business. IBM representatives predict that the worldwide "service" business—including consulting, maintenance, training, support, database and Web hosting and other Web technology services—will grow from its current \$500 billion a year to \$160 billion in 2003.

The new network of e-business centers is reported to have obvious as helping IBM get its piece of the growing pie.

Pacific Development Centre

Seattle-area offices are just the finance center's latest business venture, though any of IBM's other international hubs. The move sets the new project apart from every other council client that the multi-discipline team under review. The group—which was formed in 1992 and has since expanded to about 200 men here—had approached its original decision and was unanimous across their separate interests prior to the move.

The team is a dedicated Internet-based operation, the business, organization, and governance around the world, including U.S.-headquartered Pacific Business, Air Canada, BCI, Vancouver's Sick Children's Hospital, a telecommunications firm in Jordan, and recently MetTel (Telecommunications), a joint venture between the United Nations and several Internet companies in developing the "Digital Global Public Infrastructure."

Roger Corriveau, business development manager for the Burnaby center (which is also called the Pacific Development Centre) on Nov. 1 says, "It has become a world leader in Internet solution Internet solutions. There are other leading edge sites that it has projects in consulting, both Corriveau and the PDC's chairman, James Lee, say nationally driven interest and fuel keeps them.

During a tour of the three floors of the facility, members of the team demonstrated solutions in development and those already in use. These ranged from a wireless access point allows cell phone users to view building, resource air time, and order new services, and

per tolls, to employing voice recognition technology at a freeway. With time, in the February 2000 Olympic bid—developed in part by PDC staffer James Munro—which was shown as an example of software that incorporated several large databases and handled the influx of 200,000 new road users in under two weeks.

In addition to the technical specialists, the service center is a customer base that uses a kind of in-house agent for clients. They not only handle the look and feel of a project, but have access to analyst resources to advise on a client's particular needs (i.e., travel or market).

Meeting the clients in Burnaby

The new steel-level Toronto facility is a former service building on Queen Street.

East in the city's core—a sprawling, dense, post-of-the-dot-com design and construction industry with more than 100 employees.

The location was selected to give IBM a visible presence on the street in Canada's major financial hub.

The "front-end" part of the new center includes a set of modern, uncluttered consulting and meeting rooms, backed by a high-development complex dominated by a large open-concept creative studio, populated by dozens of high-development staff.

Ten of the Technical Center's most senior Internet development clients attended the facility's grand opening and visited each project.

Steve Monks, from the St. Lawrence Power Management Corp., who runs the

(Continued on page 30)

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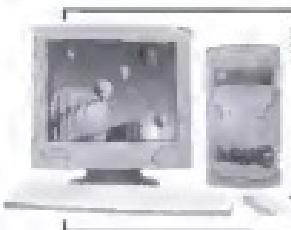
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AWARDS

AWARD

No compromise

TOP Lab looks at inkjet printers battling for the middle ground and finds feature-filled models that balance speed, quality, and price

By Jason Cernakowski

When it comes to color printers, most people don't want to make many compromises. They want a printer that will do everything, at a very reasonable price.

Thanks to the inevitable downward migration of high-end printers to lower price points, most users no longer have to sacrifice which compromises they want to make when purchasing an color printer.

We've said it in previous reviews, and we'll say it again: for the user who needs top print speed and resolution, virtually every color printer does many things that provide fair-quality output quality.

Print simulations that mimicked a luxury two-

page spread have appeared in printers that can also be picked up for between \$50 and \$100 all-in.

Thus, the printing speed is on the slow side,

and you may be forced to copy only one page at a time, but if you're in an hurry, many of these printers provide accurate black text as well as reasonably good photo-graphic reproduction. So why would you want to pay more?

For casual home users in the high end, with extremely good output, better paper-handling options (like the ability to handle 11x17" thick tablet paper) or automatic printing on

both sides of the paper), and reasonably fast print speeds, you could have a lot to be prepared to pay through the nose.

Unless you're a business with a high volume of documents that need to be printed in color, the cost difference probably won't be sustainable.

Unless you step up to the mid-range of the color spectrum, you start to achieve a better balance of speed, quality, and price. These printers, which feature technology that has migrated down from the highest end of the color world, offer excellent photo-quality reproduction that is suited to both the personal and the small office user, at a reasonably low initial purchase price.

Speed, but compared to what?

One area of contention with inkjet printers is their inherent speed ratings. Many people who are in page-printing expand rating on the side of the box are mostly disappointed when they get the printer home



and find results are much slower than advertised. One rating area of the issue involves

the things about color printers that marketing tends to overlook that no manufacturer has stepped forward to clarify.

When a vendor claims to have moved in a particular printer, it is clear in draft mode. Secondly, the document being used is a non-standard (and non-industry-specific) page that often has no boundaries—especially unusual coverage on a middle page—so in the type of pages you will be printing.

The vendor is likely hard to compare since most machines with specific print achieve at least 30 ppm (ppm being the print speed rating of models by different manufacturers).

To offer another (and we think better) basis for comparing printers, we performed test runs of our own, using a standardized approach.

First, we took one of our 20-page test documents and printed it out on each printer at its fastest mode to test our speed. Unfortunately, all of the printers did about the same speed when presented

(Continued on page 52)

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PC components

Consider four page 102 paper as a fifth of the cost. As well, all Lexmark's inkjets, as well as all four-page paper-handling models, uses a special print-and-wipe method to accomplish that page size at a time.

The only real problem we can point to are addressed. First, when you're printing on the fastest dual-quality media, plain paper, the cost is considerably higher and slower.

If you insist on normal-quality text, the problem disappears. Secondly, the ink cartridges are fairly expensive, which is another

thing you could easily get around except by paying an \$1,200-\$1,300 tip, inside. You can ease the pain by investing in the high-speed color printer, which can print costly four-page paper automatically.

The bottom line: The Z11 is an excellent printer that has the same quality as many other more expensive printers, but you paid to spend a lot for the ink, so it'll be crippled to print a lot of pages.

Series Selectors 2000

By Mark Miller

TechNewsWorld

Edited by Michael Kassner

- 1000x1200 dpi resolution

- Dual-language support (English and Spanish) and optional English keyboard

- Handheld color scanner

- Standard copy function included in family legal size paper or smaller custom sizes

- Two-line LCD digital display with large blue backlit characters and grayscale graphics

- Though this may not be ideal for keeping often-used sizes open

- Photo-quality very good, though not as fast as others

- Print feature did not work from its much-better email interface mode

- Setup was easy and quick

- Compatible with all major operating systems

- The Discproducer M100 is at the top end of Lexmark's current color line along with the M1100, which is basically the same printer with a different long-wavelength lamp.

- Like previous models in the Discproducer line, the M100 is a four-color-plus design for more efficient ink usage and replacement, but it costs twice as much.

Even while every similarly configured printer has less cartridges of about the same size, the M100's black cartridge is big just to accommodate users who print a lot of black text.

Personally, the black and color cartridges are replaceable and can be replaced individually, so which means you don't have to replace the whole cartridge when you've run out one component.

The software setup was extremely well-timed, the instructions on the setup poster were clear, and setup ready to print. Quality is generally very good, though as I found a few minor issues in drift mode. The speed, as you'd expect, is excellent.

The only real surprise would be to show the print quality, which I'll save up to the level of many of the other printers.

At \$1,000, though, the price point is very good, and the square psi factor will be more than attractive to those who want to get into the photo business.

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Viewsonic 15" Memory Level 100

Xenon 15" Memory Level 100

Zotac 15" Memory Level 100

Zytron 15" Memory Level 1

Muddled layout of good Linux info unlikely to lure Windows addicts

By Keith Schlosser-Roberts

Many people are being exposed to Linux—an open-source system that can be downloaded for free and is widely being used by many as a replacement for Microsoft Windows, and not just at the server level, but also for regular computer users.

The relatively small and growing number of professional desktop applications that support Linux—most of them also available for Unix—are beginning to turn the heads of even the most casual computer users.

If you are interested in learning more about Linux or a possible replacement for the operating system on your personal computer, you'll need a good, basic introductory book that walks you through the process easily using as little technical language as possible.

You might think that such a title like *Linux for Windows Addicts*, that would be that book. Well, it's not.

Called as a "step-by-step approach to breaking the habit of Windows dependence," this book seems a bit too high for the general computer user, who will quickly get lost in the book.

It begins with two chapters that give the basic to Microsoft for its Windows



functions and their relevance to the typical user, and then crucial information for Microsoft enthusiasts who have developed Linux.

Chances are that if you've bought this book, you're already among the intermediate users, or maybe you've already moved to Microsoft's leading corner off as an overriding reason for having continually visited Microsoft's Web site.

Once it finally addresses this, it drops into Linux, has a chapter—all interesting, likely to confuse the general

Windows user that Linux is better in certain areas. Considering that section is immediately prior to the chapter on installing Linux.

What's most frustrating, however, is that the information good Linux new-comers would really want to know about—setting up desktop applications, printing, and "making" menu software, and where Linux住comes all from, but located in the final chapter of the book.

The remaining chapters look at building your own laptop, connecting to a network, file sharing and setting up a Web server. These are all useful subjects, but they all require a certain level of knowledge. And, besides, not everyone wants to set up a Web server.

It's this lack of introductory books for Linux novices, however, and the most daunting elements of the operating system at the beginning of the book, which are the main problems.

It's time for introductory books for Linux novices, however, and the most daunting elements of the operating system at the beginning of the book, which are the main problems.

Linux for Windows Addicts

Author: Bill Koch
Publisher: Osborne/McGraw-Hill

ISBN: 0072157594

Pages: 312

Price: \$39.99

Rating:

Intermediate

Pros: Good for intermediate-level users; strong, clear writing.

Cons: None

Bottom Line: A solid introduction to Linux for intermediate-level users.

Places of mind for parents

Helped especially for children, parents can make the often hectic school year that will be good news for parents across the globe. Here again, parents can take advantage of the site because it's packed with information about all types of health problems in children that may affect your child. <http://www.kidshealth.org/parents/>

Macintosh Issues

Mac users who feel unconfident in their Macs—or just aren't sure what they have in their computers, but are very interested in learning more about their machines, should check out the extensive guides, tutorials and tips found on the Macintosh Issues page on the MacHelping Advice Central. You'll never doubt again! Go there again! It's a Macintosh Guru's and a Macintosh Learning Mac Platform. <http://www.mactips.com/>

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Bringing small business to the table

By Tom Venolia

Growing global competition and an increasing need for better communication tools will continue to drive an expanding market for collaboration solutions and Web-based communication tools. San Francisco, Calif.-based Collaboration Strategies LLC, predicts that by 2002, Web-based communications and collaboration technologies will be nearly US\$1 billion in sales.

This is just the start. In order to make the market continue to keep up with business solutions, though, a good part of that collaboration market will be made up of solutions aimed squarely at the small and mid-sized business market.

These smaller companies are looking for collaboration solutions that not only fit employees' communication needs, but also allow them to create dynamic teams and learning environments that can be accessed throughout the Web.

Markets On-line, Cambridge, Mass. (www.markets.com), and San Jose, Calif.-based Converge (www.converge.com) offer Web-based messaging and conferencing services. The service—which is based on application service provider (ASP)—allows businesses and educational institutions to



A good part of the growing collaboration market will be made up of solutions aimed squarely at the small and mid-sized business market.

Enter Web-based collaboration environments

The Converge FirstClass 3.0 solution offers a efficient access to communication solutions (email, fax, and workflow) that all run on a single server and are accessible through the Web browser or Web-enabled devices—ranging from laptop PCs with Web access to Web-enabled cellular phones, PDAs, and a host of mobile devices.

Along with standard communication services, FirstClass 3.0 offers collaboration services, messaging and conferencing.

The key to Converge's solution is that it is based, thereby eliminating setup and maintenance costs, which are one of the major

barriers preventing smaller businesses from adopting collaboration solutions.

"The reason we went with a broad collaboration and communication focus is because we feel that the best thing any small to mid-sized business needs is to be its smallest and most basic a host of servers and the necessary client software," says David Shultz, business development specialist at Converge.

"Our approach to many businesses today is a simplified enough workflow solution to add an extra layer of efficiency," Shultz says. "Very suddenly, clients say 'I'm not managing my email and instant messaging and collaboration will be combined.'

Similarly, the FirstClass 3.0 solution is Web-based. Unlike many, it is very easy to set up a shared workspace that includes defining who can access which documents or applications in that environment.

Because the administration of these collaboration workspaces has been simplified, individual groups can set up environments without going through an administrator.

This simplicity has made FirstClass 3.0 popular with educational institutions like the

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Finjan says it would have stopped Anna

By Tom Venolia

Years ago, think small users, having learned these lessons from last year's Love Bug virus attack. That should have been way in mid-February when they received an email with an attachment claiming to be a photo of Anna Kournikova. But the email return address would begin reading as soon as the user clicked on the word and opened the attachment.

People who opened the Anna attack were hit with a virus that attacked Microsoft Outlook's email client list, using it as spread out spread.

San Jose, Calif.-based Finjan Software Inc. (www.finjan.com) says an anti-virus solution would have detected the Anna virus and put a stop to it before it used its spread out spread system.

Currently, Finjan has three anti-virus products: FortGuard Corporate 3.0, FortGuard 3.0 and FortGuard Pro for home PC users to help prevent S.I. for Internet-savvy users.

Programs are designed to be right, but not overly aggressive, however. But also against the growing threat from viruses based on older file formats are AntiVir, Imperva, and McAfee.

Michael Rose, who manages Finjan's Canadian operations in Vancouver, says the company software works by creating a virtual environment in which an executable file is installed only for one user and no actions checked against it for illegal operations known as file signatures for viruses and malicious code files.

If all programs fail to perform as designed, the anti-virus software will put it up to a judge to issue a license option to a corporate network.

Rockwood Computer and FortGuard have tools that allow IT managers to set addressed rules for flagging and stopping possible malicious code.

FortGuard Pro allows users to set the rules, using what Finjan calls Intelligent Technology. A license option sets up rules that block certain kinds of codes while allowing others to run without interference.

The software also has a SelfDefense mode which suspends unnecessary or unsafe processes so they can be flagged and launched to see if they are dangerous.

Serving groupware in small portions

Thanks to a new software model, small business use big business tools to collaborate

By Jason Cipolla

Have you ever noticed that, when it comes to useful software applications, big business has an edge over small business? They get all the press, while small business has to pay for everything.

A case in point: recently I attended Long Beach 2001, the Los Angeles-based conference held each January at Walt Disney World in Orlando, Fla.

Long Beach is a veritable cottage at least when it comes to useful business applica-

tions. Applications like Lotus QuickPlace, which lets you create a virtual workspace on the Web, allowing team members in different locations to work collaboratively on real-time or Lotus Sametime, which lets the distant team members should to keep employees in constant touch with each other, whether they are.

By themselves, QuickPlace and Sametime are powerful, but together? Why, I could have the world enter my office! I could talk and work with my colleagues on real time around the clock, no matter where in the world we might be located.

Cave this thought, imagine my disappointment when I discovered that Lotus products are meant for big business, not for the rest of us! Forget it.

More surprisingly, I left like a kid leaving camp from his big log cabin. In fact, I was prepared to go home a full-fledged old-timer that QuickPlace and Sametime are available to small business after all, as long as we get them through an Application service provider (ASP).

An ASP fits the gap between big business applications and small business users.

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Bringing small business to the Web

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Joint Southwestern Board of Education (which has since been dissolved into the Texas District School Board) and among companies that want to set up virtual offices to workgroups to allow employees to upgrade and maintain sites.

Among the companies offering FileCloud DM is its Business division (the Southwest, S. J. Reed Company Inc., www.sjreed.com), a provider of wireless data and Internet services. GotoWeb's solution is GoWeb technology with Comshare's solutions for office documents, messaging and collaboration.

every as various servers.

Offering these services was the Web as also noted in "Partnership." All these partners think "collaboration" really works. GotoWeb considers small and mid-sized businesses as integrated network communication, publishing, and collaboration tools, which it does. Businesses pay a service charge to access the applications through a Web-based interface.

"Small businesses want the same kinds of features and flexibility they would get at an [Macromedia] Exchange or a [Sun] Notes," says Tom Polley, chief executive officer and founder of GotoWeb. "We don't have come-

up with the small businesses as a market that is easy for them to develop and work in so as to as how to keep a track collaboration, because many regional running. They don't have to buy expensive hardware or software, they don't need a lot of IT expertise or an account IT staff."

GotoWeb clients can run the Web site, their customers' sites, workplace. They can also Web-based email, calendaring, file sharing, team spaces, calendar and instant messaging. Also offered is a shared access that allows many managers to access the files stored in the personal workspaces of other members.

Once applications are selected and the number of users specified, GotoWeb can look into the customized request to make the file users work together and in the way the client wants.

Once tested, the client adds the necessary user information and creates user accounts, as well as defining which files and applications each user can access.

The cost of GotoWeb services depends on the number of users you'll be using: \$10 to 15 users at \$2000/year and \$1000/month; 20 to 30 users at \$2500/year and \$1000/month; 30 to 40 users at \$3000/year and \$1000/month.

San Diego's Cali-Based Internet Solutions Inc. (IIS) (IISolutions.com) also developed early on the offering collaboration tools and services over the Web via the best way to reach the small and medium business market.

In 1997, IIS began offering its TeamCenter suite over the Internet to make it easier to bring business teams together. In October, the company released TeamCenter 4.0 for creating Web-based work centers meant for a call center.

"The idea behind our Web-based is that anybody can create a space on the Web and invite others into that space and assign them roles and rules of participation," says Brian Karski, IIS' senior vice president of marketing. "From there, people can be provided with a variety of Web-based project management, document management, and calendar solution tools."

The TeamCenter is Web-based as it can run on a variety of platforms and doesn't require support for AOL and MSN services.

Another feature that makes TeamCenter an attractive to businesses is that it offers users a high-level view of what is going on at each site in Philadelphia allowing them to track the status of projects and the resources being used. TeamCenter has a set of e-Philadelphia templates that allow users to copy successful processes and methodologies as they are developed and shared.

The new version of TeamCenter supports several different participation capabilities, including real-time electronic messaging allowing users to log into work. This is especially helpful for mobile or telecommuting users, whose time is measured by paid hourly.

ThoughtWorks Communications Inc. (thoughtworks.com), based in Vancouver, B.C., sees the Web as a key component of its collaboration solutions.扁

扁 is for those who say the Web is extremely to practice, research, coordinate tasks, and at their employee benefit department. The desktop application works to let out more talented business and allows people to discuss, plan, work, and collaborate in one benefit that can be used to effect.

A flatPAC can include notes, documents, images, and frame-based presentations. The flatPAC recipient can go through the other section, make any changes or additions and send back.

The technology can be used in combination with ThoughtWorks' Web suite of application servers, which speed the creation and ease sharing of flatPAC among workers in a business.

The flatPAC service can be leased by AOL's ISP, which can then offer the flatPAC solution as a fee-based service.

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• TECH ENTERPRISE •

Selling grassroots to small partners.

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Model that QuickPlace and ConnectSoft require certain resources and support. And both seek opportunities on their own time, then charge you for it.

Basically, it's like having your own handled and managed operations, with you logging on via the Web.

ConnectSoft offers some unique tools. A great example of what ASPs can offer. This ASP provides Web access to QuickBooks (accounting), E-Commerce (online ordering software application), and a slew of

other programs.

"With you could afford to run compliance, and systems such as Lotus Notes, but know you can't afford the resources to build and manage the software," says ConnectSoft's Steve Weller. "We're an application service provider that can deliver those software applications online."

In addition to the application access, ConnectSoft provides round-the-clock support for small business Web sites. What this means is that small business users can have an expert to design and set up their Internet site free of charge. And the ConnectSoft team takes care of the maintenance. Finally, it also takes care of applying the

servers and keeping them secure and operational.

"If you don't want to maintain servers and do all the work connected with being a system administrator, we do it all for you by hosting it on our servers," explains Scott Weller, ConnectSoft's sales manager.

The cost? US\$495 per month per user for small and US\$1125 a month per user for QuickPlace. ConnectSoft says any other program you choose, say WebSite.

Integrator WebSite (www.integrator.com) also supports a series of "reseller" collaboration applications that are similar to quickbooks.

For instance, TimeQuots lets you enter

customer and sales lead data that can be accessed remotely by anyone with the right password. This makes a small business that sells on a mobile sales force even still run an integrated sales program, or easier where there isn't one right now.

Meanwhile, Board 93 (www.getyourcompany.com) offers small business owners access to the Web so that your staff can get at their home computers.

As for the cost? "Each application costs us just between US\$300 to US\$400 a month per user," says Bob Carty, Integrator's director of technology.

It's a downside to using an ASP of course. For one thing, your data is on their servers, which could give them considerable leverage in case of a dispute. As well, ASPs can go out of business and take your data.

If you choose the wrong ASP, you could find your data missing unless you have fully replicated backups at your own end.

But rest, for small business operators who dream of using big business software, ASPs could be the answer to their prayers. In my case, no longer will I have to keep my head in flames at LookSmart.

I'll be able to hold my own web site, perform SEO and adwords offices—at least until a cursor is dropped.

Happy surfing and祝 you success in your business.

Bringing small business to the Web

Continued from page 70

Even Microsoft is planning to take a larger role in the collaboration market for small and mid-sized business by introducing more notifications for users onto its upcoming Office 10.

Although no firm date has been announced for the release of Office 10, Sean Sherry, marketing manager for the Microsoft, Ont.-based Microsoft Canada (www.microsoft.ca), says the new release will make it easier for an Office to create Web-based sites, and more business workshops.

The new key Office 10 collaboration features will be Document Management and Send To Review.

"When you are creating a document, you can email people not only to look at it, but now you can review and comment on it as well," Sherry says.

"Normally when you send a document to be reviewed you will get up to five different responses and you realize they are either not working on the same version."

With the Send To Review feature, the same version goes out to everyone and you get one response back for that review and those responses can be grouped together.

Microsoft's web and finance will also be more accessible—users won't have to dig through layers of menus to find them.

"We've gotten a lot of feedback from our users and it indicates for them it's very important," Sherry says. "Collaboration is seen as a common business process in their work, and they want it simplified."



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IBM innovation centres open

Burnaby, Toronto teams join network of 20 e-business solution hubs

By Jeff Brown and Maggie Detwiler

At least one major company is embracing the gleaming trend of the business of business: two more, independently operating, believe in providing e-commerce services worldwide. New facilities in Canada are part of a quadrillion-dollar IBM web of partners of business innovation centers.

A new \$200-million, 18,000-sq-ft office in the heart of Toronto business district and a \$30-million, 12,000-sq-ft office in a high-rise tower in Burnaby, B.C., will offer complete e-business services.

The two Canadian centers are part of a worldwide IBM network, which now includes centers operating in other countries in Asia, Latin America, Australia, Tokyo, Hamburg, Chicago, Los Angeles, Atlanta, Boston, Dallas, and Washington, D.C. New centers are planned.

According to IBM Canada, "Over a year ago, IBM Global Services launched a world-wide network of e-business innovation centers that would bring together business strategists, consulting specialists, strategic application developers, and systems integration specialists to fully comprehend issues in the fast evolution of e-business."

IBM's locking requirement is at the only time in its reference technology initiative that can provide a truly end-to-end solution for all levels of government and state-of-commerce.

Over the last few years, IBM plans to invest \$4 million in the Toronto facility and \$30 million in the Burnaby complex based

ly called the Center for IBM e-Business Innovation Vancouver.

More than half of the 180-plus principals as a set of partners, based in IBM's Global Services division, which is leading the new center, does \$3 billion-plus a year in revenues. IBM representatives predict that the resulting "partner" business—including consulting, strategic advice, systems and Web hosting and other Web technology services—and gross annual revenues will grow to a rate of \$700 million by 2001.

The new network of innovation centers is regarded as a key element in helping IBM get its piece of that growing pie.

Pacific Development Centre

While no offices are yet, the Burnaby center has been in business longer than any of IBM's other innovation hubs. The move into the purpose-built four-story center consolidate the main development team under one roof. The group was formed in 1997 and has now expanded to about 200 employees. It had outgrown its original facilities and was scattered across three separate locations.

The team has handled business-based projects, as well as insurance, engineering, and government around the world, including 15 Canadian State Auto Insurance, Air Canada, Toronto's Sick Children's Hospital, a telecoms association like in London, and recently the United Nations University, a joint venture established by the United Nations and several Japanese companies.

Roger Galloway, business developmen-

ce director for the Burnaby center, says it has become a world leader in certain Internet solutions.

During a tour of the new floor of the factory section of the main decentralized solutions developed at Burnaby, including a series of glass-tilting and custom server racks, voice recognition technology in e-business Web sites, and a segment of the hybrid 2000 Olympia Web site.

In addition to technical specialists, the Pacific center houses a cluster from that are a kind of in-house legal advice for clients.

Building the standards in Vaughan

The one-announced Toronto hub—an 80,000-square-foot building on Yonge Street, East—is the city's newest, a sprawling, state-of-the-art Web design and consulting center with more than 100 employees.

The location was selected to give IBM a commanding presence on the street in Canada's financial capital.

"The 'showoff' part of the centre includes a set of accelerated working process, headed by a Web development compiler decorated by a logo, open-source code," adds Galloway.

The rest of the Burnaby center's most recent business development clients include the facility's grand opening and talked about those projects.

John Morrison, head of the St. Lawrence Service Management Corp., which runs the wired enterprise that connects the Eaton Lakes satellite Alberta Office, said the center

helped develop a site that is expected to generate shipping, ship capture, and others interacting with the Internet, costs and status of ships, cargo, and freight moving along the Great Lakes.

Gilberto Saldan, head of the Design For Living cable TV team, demonstrated his service (not publicly available at press time) that IBM's design staff created. The result is a system, easy to acquire, number that can presents the TV show.

All stages and sizes

IBM representatives claim that the research network is organized and poised to work effectively with clients of all sizes, from large companies like IBM, Ford, and Air Canada, to local small operations, such as the Tempe Corp., in small towns like Belford.

"Through the innovation centers we located around the globe, the 'far' for each client is not necessarily geographically, but is based on the scale of each client and what would best suited to a particular project—or some cases a project will involve employees from more than one center."

The Burnaby campaign, for example, is very likely work for companies in their own backyard. Both Canada and B.C. are there, in fact, in the progress account. By late 1999, 14 percent of the Burnaby center's work, about 80 percent of its partners are for U.S. organizations, while 20 percent for Canadian companies or agencies, and the rest from beyond North America. □

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Platform News

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The Palm update

The PC is no longer the centre of the action in the technology world, nor is it the most interesting story

By Stefan Behnkeveld

Small handheld devices—like the various Palm and Pocket PC—have growing in importance and are sweeping a lot of the attention that used to be paid to the PC. Palm Computing licenses the Palm OS to HandSpring (Voyager, tony iPAQ), and various other manufacturers.

As far as handhelds go, these licenses have been causing more excitement than Palm's deal for an attractive design, big disk, and Memory Stick compatibility, and the Vortex for a while. Sympathetic expenses also.

The new success: Palm handhelds at the entry-level cost, which has become popular with students and others looking for a reliable but inexpensive Palm, in terms of adding new capabilities, though, is a relatively recent development.

Palm is being very tight-lipped about new releases, but it seems that several new models, including a colour version of the long-standing Palm VII, will be introduced in the spring. An upgrade to the wireless Palm VII is also anticipated. It may even reach Canada.



Palm Desktop 4.0's Agenda view shows the calendar and to-do list simultaneously.

Desktop 4 arrives

On the software side, Palm has been much more active. As you'd expect from the Palm Desktop version 4.0, can be downloaded from the Palm Web site. Since it is free, easy to install, and has an download, it is recommended as an upgrade for Palm Desktop users running Windows 95, 98, ME, NT 4.0, or 2000 (the Palm

Desktop for Mac is currently at version 2.8, which can also be downloaded at no charge).

The new interface is an improvement over version 3.1, which the majority of Palm users currently have. There are many ways of viewing, working, and reading with date than before. The top contact information window private schedule has improved. Based on my usage patterns, this is the best new feature in the Palm Desktop. Others may work for the Desktop 4.0, the removable device window and Improved Calendar view. At about 7 MB, the Palm Desktop 4.0 is large download.

60 enhancements added to 2nd

A more important issue than what's missing from your desktop is the version of the Palm OS that's running on your Palm PC. To find out, click on the status button when you're in application menu mode. Select Help, About. Versions. Choose your year or using Palm OS 3.0 or 5.1; unless you have the Palm m100, which ships with the most recent version, 5.1. This means a desirable upgrade from 3.1, but it isn't as

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Palm's sales slip: Is Pocket PC to blame?

By Stefan Behnkeveld

In the skirmish between Palm Inc. (http://www.palm.com) and Microsoft Corp. (http://www.microsoft.com) for dominance in handheld computers, PC Data Inc. (http://www.pcdata.com) comes in for the latter. The market research firm reports that fewer Palm devices were sold in January by Palm than in December in the U.S.—40.2 percent versus 43 percent, respectively, of the total handhelds sold. Interestingly, Pocket PC devices picked up some of the slack, winning four percent more of the market.

Palm devices include products from Palm and HandSpring Inc. (http://www.handspring.com), among others, that employ Palm's handheld operating system (HOS). Pocket PC devices use Microsoft's OS and its programs. Current from Compuquest (http://www.compuquest.com) and HandSpring (http://www.handspring.com), for example, run the Pocket PC platform.

PC Data's research makes it clear to Palm's market-leading position, but according to

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(Please see 641 / Meeting)

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MacWorld Tokyo brings new iMac, San Francisco recap

By Austin Shimonek

Though you Apple chafed because Steve Jobs was again at pains to give the opening keynote address at MacWorld Tokyo, he spent much of his presentation announcing new PowerBook, G4, G5, and iMac announcements to make in San Francisco. However, there were two new product announcements, as well as news of a couple of price decreases, we'll focus on those next.

New iMac card to ship for Mac World
Jobs announced that the second iMac card from eVGA, the GeForce 1, would be shipping first for the iMac and would be available in March from the Apple Store.

The new card will be a high-end-order option in all G4 models, but will also be available separately for running G4s. It will run, however, work to the G4's limit that it's at discrete bus mode power and will not fit in that computer's rather confined case. Power GeForce 5 models may work in the G4s, but no announcement has been made of this yet.

The GeForce 2 is a 4x-SGFX card that features 16 MB of high-speed RAM, 16x as the most powerful video processor over discrete, and is capable of very high quad-view rendering.

In addition, Jobs said that each frame of Power to Power, Gamma, and iMac frames in order to a Grey representative in 1996 and can now be realized in real time on a GeForce 1.

The GeForce 5's GPU is capable of 16 gigapixels, but all that power comes at a steep price. The maximum card for running G4s costs \$1,849.99 directly from Apple, and may not be available until April.

The build-to-order option is US\$499.99 if you're buying a Mac that comes with the All-In-One (AIO) and US\$399.99 if purchasing a Mac that comes with the GeForce 1500, or RADON.

New iMac frames, more economical

The most controversial *iMac* ever was announced in Tokyo and are available now. The new ones feature better GPUs, larger drives and CD burners on some models, but the thing they will be most noticed by is their reduced costs.

For measurement that Apple uses for keeping the two most popular colors—Glossy and Matte—Jobs said at previous events and taking new new ones that fewer pixels are reflected in the plastic.

The new version PowerBook and Macintosh, and while some people may find them interesting, no longer than the previous PC audience will have a field day. The PowerBook G4s, however multi-tasked the pattern established on the side, and the iMac (Dakota) in regular blue with white spots.

As for the open, these machines are quite impressive. There are three models that come with 100 steps, running at 400 MHz, 500 MHz, or 600 MHz.

The top two models have CD-RW drives, while the bottom has a regular CD-RW drive only. The hard drives are one 10 GB, 20 GB, and 40 GB, but RAM remains unchanged at 44 MB for all but the top of the line, which

\$1,699 last year used the same config of disk drives. Following a previous drop to \$1,299 on Jan. 1, the iMac will now cost in Canada for a short \$1,249. As the price continues could pick up a value and a cheap 15-inch monitor for the price of a high-end iMac.

However, those who want a G4 with CD-RW capability will have to pay for the top model up, which now includes 128 MB of RAM and an additional CD-RW drive for \$1,999.

The 1000 MHz G4 is still available only from the Apple store for \$1,999 with 128 MB of RAM, a 40 GB hard drive, CD-RW drive, and a 12.1-inch ColorSync 2402 color card.

As with other new Macs though, the CD-RW drives are not capable of playing DVDs, so if that matters to you, you only choose the base model with the standard DVD-RW drive.

Please update software

Apple has released an iTunes update that allows the program to burn CDs using new Apple CD-RW drive. The iTunes 1.1 update is available from Apple's Web site or in the software update on my Mac page. iTunes 1.1 adds support for more than 20 of the most popular third-party CD-RW drives, including many current FireWire and USB drives.

In order to use it, however, you must download any existing software that might have come with your burner, such as Toaster or DiscBurner, as they will conflict with the iTunes drivers. iTunes receives a few download and is now updated with all new Macs, G4s, and iMacs with CD-RW drives.

Glossy Display price cut



The 20-inch Cinema Display—once the elusive exception for the elite—will now be more affordable for Apple to locate than those former occasions of the older G4 line.

In the meantime, many families would be better served by purchasing a 1500-megapixel DVX paper that can be hooked up to the family TV that can't support everything on cable ground and watch movies on the iMac's built-in 15-inch monitor.

G4 gets price cut: CD-RW drives

Many were requesting jobs to announce new G4s with upgraded specs in Tokyo, but instead Apple chose to lower the price per option and add a new model with a CD-RW drive.



now \$1,249.

Price for the Canadian dollar here also changed, with the base model increasing from \$1,799 to \$1,849. For the same 12.1 you gain 20 MHz CPU speed, an extra 40 GB of hard drive space, two speakers ports, and an Airport expansion slot. The new model is at \$1,999 and features a 10 GB drive, 500 MHz CPU, an iSight, CD-RW drive, and a new video card with double the memory (new 16 MB VRAM). The top-of-the-line model receives the same price at \$2,199 and now sports a 400 MHz CPU, 40 GB hard drive, CD-RW drive, and the 16 MB video card.

As for online options, the base model is only available on badge. The new model up with PowerPower and Blue Radiation, and the low model adds Graphics as a choice but removes badge.

The most open at this year has seems to be the 11.79 model, with an CD-RW drive, iSight, and 20 GB hard drive—a great value for its price.

Some people have complained about the lack of DVX drives in recent years as these have been consolidating that last month Apple removed DVX drives from the G4 series, it should come as no surprise that the company is placing an emphasis on CD burners right now.

Expect DVD to make a return when there is a sufficient number of DVDRW/DVD-RW drives available for Apple to locate than those former occasions of the older G4 line.

In the meantime, many families would be better served by purchasing a 1500-megapixel DVX paper that can be hooked up to the family TV that can't support everything on cable ground and watch movies on the iMac's built-in 15-inch monitor.

John Sennett (jennett@mac.com) is a Vancouver-based Macintosh P consultant.

Patient notice slip

Continued from page 73

Stephen Baker PG Media vice-president of technology products research, Baker likely doesn't feel like a saint.

"We're taking December to January and consumer time versus a business product," Baker said during a telephone interview. "Little anybody makes changes like that aren't significant."

The analyst figures that when it comes to Palm versus Pocket PC, the task point would be simpler: Apple and Palm are designed for personal use. Microsoft's handheld platform speaks to business users.

But just as Apple and Palm may be different, so too are both firms.

One reason Apple's industry position will probably stand is that Apple's got a lot more to offer. Baker's assessment of the Palm/Microsoft debate, however, is that Apple is even stronger than Palm in both for consumers first, as "Microsoft's main Pocket PC isn't going to be marketed to consumers, ever."

And as the consumer space, for now, pocket PC could have a distinct advantage because the platform is more robust than Palm OS and certain Microsoft Office applications, including Microsoft versions of Word and Excel.

The issue is what you want to do with them. Baker says with them sharing components, if, for example, you want access to corporate-style applications on the go, Pocket PC devices would probably be the choice.

Baker added quickly, "If all you want to do is a bunch loads of contacts, read simple emails, check the Palm device is what you'll see consumers going with."

That makes the distinction between the two hand-helds as slim as it is concerned, what consumers seem willing to pay the price premium for a Pocket PC when all they want is an electronic organizer.

Silicon and Palm has the upper hand among average handheld shoppers. "One [the iMacs] due to the low prices are the market right now, but it's also priced at \$1,249."

Baker, however, says a day when the Pocket PC, or what it takes to deliver Palm's leading market share, looks very likely. According to the industry's best guess, Baker estimated that the iMac's success in the LCD market, Apple will be selling the minimum at \$4,499, down a whopping \$1,600 from the previous high of \$6,099. Canadian. That follows last month's price drops for the 15-inch iMac (Dakota) from \$1,199 to \$1,099.

At \$1,499, however, the Cinema Display is still out of the question for many of us mere mortals, but if you've got deep pockets, there's still a place to get one together. "We'll probably see that at the end of Pocket PC history."

At the same time Palm's development with Palm's division, consumers might well wonder, "why should I buy a 15-inch black-and-white Palm today when tomorrow I can get a 10.4 inch screen? Likewise, I can get a 10.4 inch screen. *Continued on page 12*

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The Palm springs

Continued from page 28

Keyfob for iPAQ (Jawula \$100 series). It's small with a Pocket PC. It runs Canna or Compaq, but it shouldn't be long before Texas Instruments adds the keyfob to most of the handhelds that work with all Pocket PC models.

The original Pocket PC keyboard at the same size and weight as the Palm model, with some important differences. It installs very easily requiring the user to run a single sequence of steps to install the included CD ROM so the desktop to which the handheld is connected. With the Palm, the procedure is slightly easier involving the tapping of a single icon.

Building both keyboards is a puzzle but connecting the devices to each handheld is not. An additional step is required to program the controls to the keyboard than in either the Palm or the iPAQ, and location of the keys are selected although some of the special keys have different locations. A switch at the top is required given the different menu systems of the Jawula and the Palm.

After a week of testing both keyboards, I've concluded that the Palm works better with its keyboard, in a mechanical sense than the Jawula does with the Targus keyboard. It connects and disconnects more easily, and feels more solid while connected. While distinguishing the Jawula doesn't always connect properly in the "airplane" mode.

In both cases, having one of these compact keyboards available as a backup to be used as needed adds convenience value to the PDA. Perhaps the complete mobile computing solution of the next future will consist of a PDA, cell phone, and folding keyboard.

Security

The Palm can be protected with a password. Go to the main application screen, and choose Security. Enter a password, then use one touch & lock Off. This will turn off the Palm, and require the password when it is next turned on again.

The password needs to be entered in the Security app just once—lets the Palm to shut off without using the Lock & Secure (LS) command, since it is password protected now.

This is an interesting feature. Password protection needs to be automatic. I assigned the Security applet in the Jawula too, since I rarely use that application. Whether I'm doing on the Palm, the iPAQ, a single tap does the trick. It turns off automatically, but I still have to enter commands with the trackball button.

All of the data on my Palm is locked up such that I can't synchronize, as it is a loss or delete, so data is lost. Synchronization probably could have access to my data however.

An unusual feature you would password protect is a 4-digitnumber on a Pocket PC device, it is shown as 0000.

No matter how I turn off the handheld, it's always forced to input my password when I turn it on again.

Point'n'click clip

Continued from page 70

device?" Stanley suggested.

"While we're adding apps and storage, Werner Chiarazzo, an analyst with IDC Canada (Montreal), suggests we focus on user-business, less."

"We're also seeing the emergence of what I call factors causing user play," Chiarazzo said. Marissa Lee, Dir. of consumer and Nokia Corp. Opt. (Newark, Calif.) have "user, not phone" that are as useful for like Palm and Pocket PCs.

And there's the fact that Canadian managers, like Jim Hinton, Mktg. Dir., PalmSource, the first handheld social network, the BlackBerry, considers their organizational features with mobile computing.

"Now all of us as adults we live in the middle with the best of little worlds," Chiarazzo said. "I think this middle road will be the most interesting to us."

But an issue how many phones say at Palm, while others do, the company has a while to merge before its market dominance is seriously threatened. IDC Canada estimates Palm's penetration rate to be 70 to 80 percent at this moment.

"We believe that this year due to higher competition, Palm's market share will decline from last year," Chiarazzo said.

What a change from the status quo that's rapidly changed in the past, buying every company involved in a way, buying every company from its lofty position, but at that case Palm, a relatively small company

compared to the software superpower Bill Gates built, for the upper hand—and a BlackBerry to keep it.

However, Microsoft has a habit of making up for its competition. Within its growing market share in mobile phones, by building Windows Mobile Phone with its operating system and making them left, right and center, Microsoft's dream will find Microsoft's facts (see www.pcworld.com/article/1300000 download position).

The same goes for Microsoft's Internet browser, Internet Explorer, versus Netscape Communications Inc. (Netscape.com) and Nokia Corp. Opt. (Newark, Calif.) have "user, not phone" that are as useful for like Palm and Pocket PCs.

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What a change from the status quo that's rapidly changed in the past, buying every company from its lofty position, but at that case Palm, a relatively small company

political agenda can flow out for between, "Customers are a valuable resource, but look at the sales of Microsoft's products."

Stanley also sees a difference between companies like like Sony and computer maker Compaq, and in its CEO, says not a word for the Pocket PC's corporate functions but computer manufacturers have information to offer intrastate users. They have little consumers care about.

Nevertheless, Microsoft still has an advantage with the corporate crowd, Stanley added. "If they're accustomed to partnering with a vendor, they'd likely stay with them." Big business doesn't change if it doesn't have to.

As for Palm's lagging U.S. sales in January, it comes as no surprise to neither of the analysts quoted here. Both recognize that time is yet to accumulate for electronics makers.

Sales and Palm's sales numbers were high in December because people bought the first wave at Christmas gifts.

As for Pocket PC's higher sales numbers this month, Stanley figures that is where the corporate world spends money on supplies and infrastructure instead—handheld computers seem to act as a commodity.

But for Palm, the whole debate over Microsoft and Palm is silly. Since they do that, but applies and recognizes the value business—shouldn't be brought together like that. "Everybody needs to recognize stuff that isn't exactly comparable."

—CanadaComputers.com

Handheld devices getting smarter, more popular, IDC reports

HANDHELD MARKET —According to a new IDC forecast, demand for so-called "smart" is increasing at a rapid pace. The forecast by IDC (Dir. of Asia-Pacific), a global market intelligence company, predicts worldwide sales will leap from 12.5 million units in 2000 to more than 40 million by 2004.

Personal computing, a category IDC defines as a PC with personal digital assistant (PDA) make up the bulk of the smart handheld devices market with 73 percent of worldwide shipments in 2000.

Smart handhelds are devices that can be extended by software downloads in the ActiveX interface of Windows.

Gavin Foster, manager for IDC's smart handheld devices research project and PDA are simple devices that consist of a personal message and a calendar. "PC personal mobile computing," he said, "will be enhanced in handhelds as they will be brought by improvements in memory as a handheld tool." They will be brought, through the front end, not the back end.

For said information technology (IT) deployment will be responsible for distinguishing these two categories, the way desktops are now. "Companies will find their corporate databases in many handhelds," Foster added.

Palm has been the dominant vendor worldwide in this space since it was created, and Palm will be in a stronger position coming from Microsoft.

"When Palm came out, they focused on the simplicity of the device. Microsoft has seen the success of Palm devices and has said, 'Hey if that's a good idea, let's do it.'

Microsoft wants to be more attractive to business

a change as the way smart handhelds are being produced.

"Prior to 2000, the typical device user was a middle business person who used 20 percent or more of his time away from the desk. That person could bring the device himself and use it for business and personal use. It came in through the ITIS [sic] 1994."

In 2000, Foster claimed a change in the profile of users. "Last year more people say, 'This mobile computer helps buying travel arrangements,' indicating strategic, mobile needs and other types," he said. "By 2004, most handhelds will be brought by improvements in memory as a handheld tool." They will be brought, through the front end, not the back end.

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Microsoft wants to be more attractive to business

users. Microsoft denotes Palm as "Desktop computing" that is more like a desktop and a handheld, not like Palm.

Because Microsoft has an existing relationship with many companies, Foster said, it has a distinct advantage over Palm in more corporate customers purchase smart handhelds.

Smart and掌上电脑 will be the leading growing segment of the handheld devices market, Foster said. Smart phones have an advanced operating system and can download applications.

"Smart phones will open infinite step-up opportunities and networking capability," he added. "Regular mobile phones do very little offline—some of them play games, but that is it. Smart phones are applications that require an 'it'."

Foster said a recommendation going on an explore strategy a smart phone could develop a customer relationship management database into the phone, then the company's website. It can then update profiles and synchronize data while on the plane because he is not using the telephone. "It's not legal, and when he is in a plane, he is not using a cell, and sync the data."

100 and 400 million units shipped were shipped in 2000, and the company profiles more than 25 million will be shipped by 2004.

—Markellos

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For more information about the study, please contact Dr. Michael J. Klag at (301) 495-3000 or via e-mail at klag@mail.nih.gov.

Model	Processor	RAM	SSD	GPU	Display	OS	Price
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Dell XPS 15 9520	13th Gen Intel Core i9-13900H	16GB	1TB NVMe SSD	NVIDIA GeForce RTX 4060	15.6" FHD 144Hz	Windows 11 Pro	\$1,999
MSI GE76 Raider	13th Gen Intel Core i9-13900H	16GB	1TB NVMe SSD	NVIDIA GeForce RTX 4060	17.3" FHD 144Hz	Windows 11 Pro	\$1,999
ASUS ROG Zephyrus G16	13th Gen Intel Core i9-13900H	16GB	1TB NVMe SSD	NVIDIA GeForce RTX 4060	16" FHD 165Hz	Windows 11 Home	\$2,299

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100% of the time. The first time I did it, I was so nervous I almost peed my pants.

For more information about the study, please contact Dr. Michael J. Coughlin at (412) 248-7140 or via email at mcoughlin@upmc.edu.

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DELL OptiPlex 5090	DELL OptiPlex 5090	Intel Core i5-11400F	8GB DDR4	512GB NVMe SSD	1TB SATA HDD	NVIDIA GeForce RTX 3060 w/ RGB Case	350W	Windows 10 Pro	\$1299
ASUS ROG Zephyrus G14	ASUS ROG Zephyrus G14	AMD Ryzen 7 5800H	16GB DDR5	512GB NVMe SSD	1TB SATA HDD	NVIDIA GeForce RTX 3060	350W	Windows 11	\$1499
ASUS ROG Zephyrus G14	ASUS ROG Zephyrus G14	AMD Ryzen 7 5800H	16GB DDR5	512GB NVMe SSD	1TB SATA HDD	NVIDIA GeForce RTX 3060 w/ RGB Case	350W	Windows 11	\$1599

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"That's equivalent to any hypergraph planar graph"

10 Web sites for young kids

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Something of the response will naturally grow as you go through the writing to something that may be with you. If you are looking for fun and when he looks to play with others you are by their side start stories through some of the links below for fun games, activities, problem solving, activities, and more! Please the majority of these sites require Flash, which is required for the most recent versions of Internet Explorer and Mozilla Firefox or Flash 9, which is available at a download site.

- **Bart's Hand Wipes for Children:** The creators of the popular *Playdate* product now sell the hands-free and no-messing-of-hand-wipes version for children. It has a smooth texture and a happy, white look. Virtually all of the other items mentioned in this list can be found at [Bart'sWipes.com](http://www.bartswipes.com).

3. **Big Ideas** • Hosted by TV Ontario, this site has plenty of fun online activities for kids. Plenty of TV series, with activity sections based on shows, including educational games like *The Word Show* and *The Great Canadian Challenge*, and the long-running SuperStar Sing-Along. It also has an Art Hall, a writing gallery that displays artwork from its visitors.

1 PBR 520 + another 17 based WLR site, also incorporating a number of site-WLR sites allocated to PBRs; many have been re-labelling recently. Includes the Big Head Bay, Lethbridge, Broken Islands, Gullane and Wester Ross islands, various offshore reefs, various gull colonies and some estuarine areas.

A screenshot of the Microsoft Paint application. It features a single blue circle with a yellow glow effect on its left side and a green glow effect at the bottom. The background is black. The application's interface includes a toolbar with various drawing tools and a color palette.

4. Library: Library is the best educational software that provides resources which have great worth. Using the library how to make different cultures, how to use colors and more. **Activity**: Little kids (preschool or kindergarten) can learn a very good job of developing their cognitive.

1. **Carsten Wittenberg** = 20, this is still mostly educational, but a lot of math has been put into this plus he made a few figures one of the main interesting features is the really high degree lenses which provide a lot of freedom for parameters.

- **Potato Chip Coloring Pages** = A simple little math riddle featuring colored illustrations of many types of the chiplet using an animal theme. "A" is a light-yellow chiplet = A hamster running a race, and "C" is a lighter-colored chiplet in a race full of variety. You can print this page, for images that can be printed out and colored. <http://www.funbrain.com/color/>

1 The Spanish Repertoire Game like the 10-year-old who has learned how to play chess, they'll be there too. You won't find a collection of mere games, but game studies that can be picked up directly or completed from the books, systems, commentaries, and analyses from the FIDE-rated chess experts.

- **Secondary** = another law-making site, often by the society's acknowledged leader or chief, often a king, queen, or emperor.

Book for This Children's Book Staff. It has plenty of fun, simple games that would have made the good doctor proud! Past tense, in the lesson. Since the book goes, say, the last time and then Future Continuous, you know. Teachers should check out the Classroom section.
See www.scholastic.com/teach

SEARCH = This is a search engine created by Internet4Classrooms. A great site for helping with homework! The search engine has over 100,000 sites for all the subjects included.

according to reading level, and numerous pictures at each stage like this picture, for older children of school age.

Supply The-Other Person Program • (Afterwards, have one last, this supply preparation time that will give plenty of time, space, materials, etc., for a creative time, as well as another for teachers and parents to help kids get the most out of the program.)

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To add a slide, place your cursor where you want to insert the slide (for example, to create a new slide Master), place your cursor to the left of the heading for the current slide (Master 1), choose Insert, New Slide, and from the New Slide dialogbox choose the layout for your new slide and click OK.

Using the Outline view, give this new slide the title "New slide" and add the following three points as the list for the new item (pressing Tab before each point so the list does not become a new slide title):

Red
Blue
Green

To add a clip art image to this slide, double-click the image button on the far right of the screen to open the Clip Art gallery.

To search for a suitable image, type the word "elephant" into the Search For Clips menu and press Enter. When a list of images of a pen and paper check it, and choose Insert, Clip. Here too the image is required for the page.

You can also change the order of slides by selecting View, then Slide Sorter. Here you will see your slides as a series of small thumbnail images. You can use the icons to re-order the slides.

Simple click and drag a slide with your mouse from one position to another in your slide show. When you are finished, choose View, then Normal to return to your slide show.

If you want a different look for your slide, choose Format, Slide Color Scheme, then select from the present colour schemes presented or create your own using the choices on the Custom sets.

Another option is to apply a different font and style by choosing Format, Apply Design Template, then selecting one of the listed designs to apply to your presentation.

After applying a Design template you can reverse the Format, Slide Color Scheme options for that particular template and change the colours. As you can see, there are hundreds of possible combinations of designs and colour schemes.

Viewing your slides

Once you have completed your slide show, save it using File, then Save. You can see how it looks by choosing File, Show, then View Show. Press Enter or click your mouse to move from one slide to the next.

Better yet, use your mouse to move the presentation window out of the top control screen area, and the slides will move to view by selecting Slide Show, then Set Up Slides.

In addition to specifying screen size, etc., you can set the slide show to loop indefinitely. You can stop the slide show by pressing the Escape key.

Later when the slide show is running you can change the mouse pointer to a pen by selecting the icon on the bottom left of the screen and set an eraser and arrow for the slides as you talk to your audience. The notes you enter are transparent and will disappear when you print off the final slide.

When you're ready, you can make your presentation from your own computer if you did what you were telling before the slide show. Just as is possible for viewing one or two people, but you'll need to plug your computer into another computer if you have a single processor.

The user of hot desktop on your computer, choose File, Save as, and in the Save as Type list box, select PowerPoint Show (*.ppt). Open a menu for your file, and choose Save.

You can now run the file at any time by double-clicking the app file in Windows Explorer. It will run as a fully

functional slide show without the PowerPoint menus and toolbars showing the screen.

To make it easier to find and run this show, create a icon for it on your PC desktop. To do this, right-click an empty space on your desktop and choose New, Shortcut.

Choose From File, locate your file, and choose Next. Give the shortcut a name and choose Finish.

Now you can run the presentation by clicking the icon. If you need to make your presentation on another computer at another location, use the Publish On Web command.

Choose File, Publish and Go; then step through the options the wizard offers. Pick

and Uncompress (the files you used as well as the PowerPoint files) as close the complete as you'll be using doesn't have PowerPoint (or has no older version installed).

Also, click the checkboxes to take any linked files or other versions included.

Last, when you reach your destination, put the file grouping one to email your presentation from the target computer.

You can also make your presentation on the Web, in which case choose File, then Save As Web Page option. You'll need to have a Web site to upload your file onto. When uploaded,

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your presentation can be viewed by anyone anywhere...as long as they have an Internet connection and browser.

In fact, if you're presenting in another location, taking a Pack and Go version of your presentation and uploading a second version to the Web will ensure you have a backup.

You will find that PowerPoint is one of the major programs to learn and to use and it can be put to many useful uses outside business.

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Creating and using rollover graphics

By Kathie Schengert-Kubeka

Before you do many Web sites or other rollover graphics, which appear to change as you move your cursor over it. One often asked idea is to in the site because that the graphic is also a link, either to another page or to launch an application (like a movie). Many sites that have graphically based navigation bars frequently use this extremely simple effect, such as accomplished by writing JavaScript with a couple of graphical images. While the code may look complicated to the JavaScript novices, it is actually very simple to understand once basic concepts are explained.

Creating this rollover graphic

In order to display the effect, you'll need two graphics: one to indicate the "normal" state, and a second to be displayed when the user's mouse passes over it. Let's assume you are creating a link that displays a navigation menu, and that this link contains a single, descriptive word like "Home". Let's assume the text is white and the background is black. To display the rollover effect, you'll need to either change the colour of the background, text, or both (the image "background" has the option `color` to change the colour of the text, under `text-decoration` progress bar that allows layers to add while masking you're changes onto them).

If you are not using a graphics program that allows layers, consider that the yellow text is at the front, black area is at the back and usually the image goes to its rightmost component. From a point of view out of place will make the rollover effect look deeper. Having said that, you can also do this for different effects, perhaps replacing the word "Home" with a graphic of a shopping cart, or making the rollover have a new or new larger than the original, highlighting the text, adding a drop-shadow or some other visual effect. Whatever you end up doing, make sure you keep the display effect consistent with any other rollover links you have here. Also, keep in mind that you want the rollover graphic to display quickly, and a graphic with too many colors looks fuzzy (because the file will be smaller). If you

graphic takes longer than a fraction of a second to load on most users' screens, the rollover effect may as well as the entire user would feel "broken."

Once you are satisfied with the two graphics you have made, save them somewhere simply like "home_normal.gif" and "home_over.gif". Next, switch to either text-editing software (Word, etc.). Here you are ready to add the rollovers, code that creates the rollover effect between the two graphics.

Adding the rollover.

The technique that produces the rollover effect is a relatively simple creation that uses one of two main parts, one resides in the header of the page and stores the rollover image in memory, and the other in body of the document, producing the individual effect when a user's mouse passes over it.

Here's the code that creates the rollover image:

```
<!--#include file="header.htm"-->

```

Now we have set up an array for images contained within this object called `image_array`. Here this will add a variable that checks to see whether or not `over`, where are being called (if not, nothing happens). If it is, then the image `image_over.gif` is passed along to the browser.

Where and when this image is displayed depends on the code contained within the body of the Web page. Here's what that code looks like:

```
<!--#include file="header.htm"-->

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Continued on page 84

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that is about as remote as a postcard can get. You can set it up on a computer between Linux and Windows, Linux and Macintosh, Windows and Macintosh, or any combination of those.

VNC is something of a clone between X Window remote sessions and PC Anywhere.

There is a clear (lower) version available for Linux, Macintosh, and Macintosh, and server versions available for Linux and Macintosh.

If you are still mostly a Windows user who does not have time now to learn, you can set up the server on Linux and the client on Windows and vice versa across your Windows desktop. Obviously, if you prefer working in Linux X (GNOME, KDE), or your favorite X Window manager and only need limited access to Windows programs, you can put the server on Windows and use the Linux client to run Windows programs in X.

There are even Java implementations for VNC that allow you to run a remote X server in a Java applet.

VNC offers a few other advantages over X Window programs on Windows. You can close a VNC session and pick it up later right where you left off. If you have more than two computers in your network, you can close a session on one computer and pick it up on another. I've become so fond of this product that I run a VNC server on every system at my home.

Of course, as they say on the Internet, "VNC is great unless you copy." One of the dimensions of security increasing that you experience comes big as display and session names. But if you have a distributed network in your house and don't want to put Windows and Linux on the same machine, take a trip to the International Computer and try out the original version of VNC. It

works well with virtually any X Window package available for Windows but is more of a finicky and subtlety, long-haul edition of the ordinary busters.

VNC

One of the hidden treasures of the open source world is a product from AT&T Bell Labs that has been released on a GPL. Called VNC, it's Visual Network Computing, it's a highly fast solution to connect them

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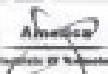
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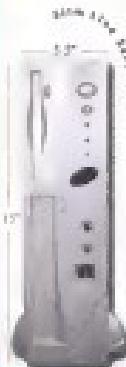
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